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EXTRA-CURRICULAR ACTIVITIES IN JUNIOR HIGH SCHOOLS[1]

COMMUNICATED BY
THOMAS H. BRIGGS
Teachers College, Columbia University

I. *Definition.*—Extra-curricular Activities are those legitimate activities not provided for in the curriculum. They will vary in different schools.

II. *Underlying Principles.*—Extra-curricular activities are justifiable in two respects. First, they offer the school its best opportunity to help pupils do certain desirable things that they are going to do anyway—*viz.*, take their places as members of social units and exercise, each according to his ability, those qualities of leadership, initiative, coöperation, and intelligent obedience, all fundamental in society.

Second, they offer a ready channel through which the school may utilize the spontaneous interests and activities of the adolescent and through these lead to higher types of activities and make them both desired and possible of attainment.

III. *Principles of Administration. Principle One.*—Whenever possible a definite time allotment in the regular program should be provided. A definite time allotment will result in a much better spirit of coöperation on the part of the pupils, and many will participate who otherwise would not.

First, "identity of opportunity is not equality of opportunity," and if the extra-curricular activities be conducted after school hours, there will be equal opportunity nominally but not really. (*a*) Parents will feel that the school session is over and therefore they will expect their boy or girl to be at home. (*b*) Employers will take advantage of the opportunity to secure at the earliest moment possible the services of pupils whom they employ. (*c*) Competing sports, entertainments, and organization meetings will make difficult the decision to stay for extra-curricular activities. James's maxim on habit breaking, namely, "avoid temptations to break over," would justify in this case the inclusion of these activities in the regular program so far as possible.

---

[1] This report was made in my class on The Organization and Administration of the Junior High School at Teachers College, Columbia University, in August, 1921, by a committee consisting of George W. Brainerd, William H. Burd, Raymond D. Chadwick, Charles L. Culler, Grover C. Dotzour, Mrs. Jennie M. Dotzour, Samuel D. Hendrix, Arthur O. Jones, Mrs. Edith B. McCleary, Stephen A. MacDonald, R. M. Marrs, Roy L. Steinheimer, Clarence E. Toole, Mary E. Wells.—THOMAS H. BRIGGS.

Second, better coöperation on the part of teachers will result. (*a*) They will not feel that such time as is necessary for these activities is "stolen" from their class periods. (*b*) Class periods will not be shortened or otherwise modified, as they sometimes are now on account of assemblies or other events. (*c*) Teachers will consider the adviser relationship not so much of an imposition, or gratuitous work on their part.

Third, a definite time allotment will raise these activities to the place of dignity and respect that they deserve as an educational feature of the school in the eyes of pupils, teachers, and community.

Principle Two.—Each organization should be sponsored by a member or committee of the faculty, who shall be appointed by the principal. We assume that no one will dispute that a group of Junior High School children should have some older person to guide them in their organizations. The only disagreement will possibly come as to the manner of obtaining the services of that older person. It may be objected that the appointment by the principal lacks democracy, that to be truly democratic the pupils themselves should choose their own sponsor. Ideally, that is true, but experience shows that it presents difficulties.

A teacher who might be very popular with the pupils would be in great demand as a sponsor, and one of the following undesirable situations might arise: over-work on the part of certain teachers, a feeling of "slight" or discrimination on the part of the pupils who were unable to secure their choice, and finally some teachers would be debarred from an opportunity to develop a skill which more and more will be demanded of Junior High School teachers. Then too, a teacher who might be very popular with the pupils might lack sufficient disciplinary or executive ability to direct successfully an extra-curricular activity.

The principal, having a wider outlook and a knowledge of the limitations and aptitudes of his teachers, is a better judge of the proper teachers to act as sponsors. Therefore, in the interests of economy, even distribution of time and opportunity of work, and the articulation of the various activities with the whole program of the school, it would seem wise that the principal appoint all sponsors of school organizations.

Principle Three.—All meetings of organizations should be attended by one or more sponsors.

Granting that the principle of "gradual transition" should apply to "extra-curricular activities," as well as to subject matter and discipline, we may further apply this principle: "Every pupil should have in school a gradually decreasing amount of control and guidance until he becomes at leaving time theoretically capable of self-direction."

Adolescents being at the uncertain stage of development at which they think in terms of their relationship to others, they should have wise guidance (not repression), if they are to reach the social ideal of becoming useful and desirable citizens in this school democracy.

We have also the aim to teach pupils to do better those desirable things which they will do anyway; and most surely, immature pupils of the Junior High School age will not reach this goal without the guidance of a sponsor or teacher adviser.

It has been stated in our purpose that through extra-curricular activities we wish to develop "intelligent obedience to authority." We can do much to carry this into effect by providing a loyal, interested sponsor, who as a *real* member of the group may stimulate both a respect and a desire for proper guidance and authority.

Principle Four.—Pupils desiring to form an organization should secure the approval of the principal.

The principal's office is the center about which the school activities revolve. The principal should be consulted before a new club is formed in order that the following be attained:

1. He may be acquainted with the group leaders and objectives of the proposed organization;
2. He may have all activities conform to the school's policy;
3. He may diplomatically discourage undesirable activities and point the way to desirable ones;
4. He may prevent duplication.

Principle Five.—The school policy should guarantee absolute democracy as to the admission and requirements for all organizations.

"The democratic school undertakes to equalize opportunities." The Junior High School should have clear-cut and unmistakable democratic ideals and objectives, and the one place above all else where they may be made to function in a natural matrix is in the conduct of the extra-curricular activities. Whether a pupil is notably dull, studious, clever, rich, poor, handsome, or ugly, he should have an equal opportunity to be a member of a school organization.

For undemocratic reasons pupils should not be admitted or barred from any organization by election or rejection by a system of balloting, especially one that permits of "black balling." The fact that a pupil is a member of the Junior High School automatically gives a choice of organizations and activities which may fit his particular interests, aptitudes, and capacities, the same as a choice is given of studies in the curriculum. His admission demands that he work for the common good of the organization of which he has been made a part.

Principle Six.—Membership should be determined by the work and purpose of the organization in accordance with the rules drafted by the members and approved by the principal.

The purpose of this principle is to aid pupils to become members of organizations in which they can best work because of their interest in the organization. The committee recommends, therefore, that in organizations such as debating, music, dramatic clubs, etc., membership be determined by try outs. These try outs should be conducted by a committee from the faculty and from the organization and the nature of the try out should be such as will determine the pupil's interest in and aptitude for the work of the club.

The committee also believes that for a pupil to continue a member of an organization he should meet certain requirements as to work in the club, dues, and attendance.

Principle Seven.—Pupils severing their connection with the school should cease to be members of the organizations.

1. The privilege of membership in a school organization has considerable force in retaining pupils in the school. This force may be impaired by permitting boys or girls to continue as active members and participants in the extra-curricular activities after severing their connection with the school.

2. An unrestricted membership may become unwieldly and may possibly work toward inefficiency due to the limited accommodations in most of our schools.

3. Beyond a certain workable number, an increase of membership reduces the opportunity of developing each member to the highest possible degree of attainment.

4. That the control of all organizations may always remain in the school proper, no chance of a majority from the outside should be permitted.

Note.—This does not mean that organizations of former students may not be formed—*e.g.*, "Young Men's Business Club of Blewett Junior High," alumni associations, etc., as these are not extra-curricular activities, but rather desirable leisure time activities of young people not directly connected with the day school, which the school as a community center may profitably promote, or they may be called extra-curricular activities of the night school.

Principle Eight.—All meetings should be held in the school buildings unless permission is given by the principal to meet elsewhere.

This is practically self-evident. It serves the better to keep the organization within the direct influence of the school as well as to insure the proper environment for activities themselves. It will prevent many sins from being committed in the name of the school, and the community might well be apprised of this fundamental principle. At the same time the way is left open for any special situation, particularly for athletic events which might not be held on the premises.

Principle Nine.—Rules governing eligibility for office-holding in organizations should be in accord with the school policy.

Our schools contain so many types of activities that a popular pupil is almost sure to be overloaded unless the school limits him in some way. One good plan is to give a rating to every activity. Following is a plan suggested by Miss Hazel M. Harwood in *School Review*, 26, page 280:

Pupil chairman, student secretaries, pupil treasurers, and senior class president, all rate	5 points
Other class presidents and officers	3 points
Managers	4 points
Captains	3 points
Council members	3 points
Team members	2 to 3 points
Committee chairmen	½ to 1 point
Committee members	¼ to 1 point

No pupil may carry over 18 points at one time. This permits many pupils to receive training, and prevents a monopoly by the popular ones. It is not usually necessary for the school to make other qualifications regarding office holding.

Principle Ten.—The school should limit the number of organizations to which a pupil may belong, keeping in mind the proper balance between the curricular and extra-curricular activities.

Some schools accomplish this by classifying the activities into groups, *viz.*, athletic, academic, art, social, etc. No pupil is permitted to belong to more than one organization in any one group at any one time.

A similar system is to classify activities as Major and Minor. Most of the athletics, dramatics, orchestra, school paper, etc., constitute majors; while thrift clubs, camera clubs, stamp clubs, and the like are rated as minors. The rule is adopted that a pupil whose conduct, health, and scholarship warrant may belong to one Major and two Minors, or to three Minors.

In addition to *checking* those who would attempt too much, the school has a reciprocal obligation to stimulate those who for some reason have little or no apparent interest in school activities. They may be backward and retiring, or their fields of interest may be narrow, in which case they need to be broadened and developed. To this end, many schools, notably the Ben Blewett School, lay down the policy that every pupil shall either be present at some club activity or shall put the time allotted upon study in the study room. Attendance is kept at the clubs as for a class. Such a plan is feasible only where the activities are carried on within the school day.

Principle Eleven.—All money handled by organizations should be properly checked up either by sponsors making reports to the principal or by a centralized auditing and accounting committee.

By the use of this principle, the pupil treasurer or financial secretary of any organization is forced to make a report in a business like way. Careless habits relative to money transactions cannot be formed with such a plan. It is educative, in that the pupil is introduced to the banking idea. The principal has at all times an idea of the amount of the funds collected and the expenditures that are being made, so that suggestions may be offered if in his judgment it may be necessary and educative in a business way.

Principle Twelve.—The school should provide for a student government organization to which should be delegated as much responsibility, with a corresponding amount of authority, as it is capable of carrying for the welfare of the community.

This does not mean that the school shall hand over to the pupils "ready made" an organization in which they are to find places and go to work. It does mean that the school should do more than merely be willing to approve an organization after pupils have presented a plan. It is the duty of the school, if there is little sentiment in favor of such an organization, to set about deliberately creating sentiment, and at the earliest possible moment to suggest a simple type of organization carrying with it what is considered *authority* within the limits of the ability of the pupils, making sure that a corresponding amount of responsibility is linked up with it. Get the pupils back of this and from time to time, as they show ability to carry greater responsibility, grant it to them in exactly the same way that a principal grants authority and responsibility to any other department in the school.

Not until this is done, will the school be capitalizing its greatest opportunity to develop citizens in a democracy. (This is a "natural matrix" for a vital project.)

Principle Thirteen.—The school should provide class organizations, honor organizations, and systems of awarding honors; all other organizations should be the outgrowth of the pupils' initiative.

1. Nearly every school has the "home room," the "register class," or "class" group organizations for administrative purposes. We believe that these should be made democratic organizations and possess extra-curricular functions, rather than that they become kingdoms within the empire. A pupil automatically becomes a member of his class organization by being classified as a pupil in the school. The class adviser, or home-room teacher, usually becomes the sponsor of the organization. There should be officers to execute the rules of the organization and to provide leadership in the attainment of the objectives. The objectives may be classified as follows: Scholarship, attendance, thrift, welfare, citizenship, athletics, and social. The scope will vary in different schools to prevent competition with and duplication of objectives of other organizations. This organization is frequently taken as the unit for representation in such organizations as Student Councils, Leaders Clubs, Boards of Control and Senates; much as the Congressional District in the American system of government.

2. For a great many years it has been common practice to award the school letter for "merit" and "distinguished service" in athletics. We believe that awards and insignia of merit should not be confined to athletics alone. At the Speyer School the "S" is awarded when 280 points have been earned out of a possible 430, consisting of at least

70 points in each of the following: Physical Efficiency, Social Efficiency, Mental Efficiency, and Moral Efficiency. This plans to develop the all-round boy, rather than a lop-sided one. This plan can be modified to work in a co-educational school. The Blewett School has a plan whereby a pupil may win a "B" in Scholarship, Citizenship, and Extra-school Activities. There are three degrees of achievement in each: a bronze button the first semester, a silver button the second semester, and felt letter "B" the third semester. It is possible for a pupil to win all three awards during the same semester. (See *School Review*, 28, p. 491–2.)

Honor societies could take the place of these systems of awards, for examples: "Societies of merit" in scholarship, citizenship, athletic prowess, or "physical efficiency."

IV. List of Extra-curricular Activities

The following is a suggestive list of activities which have been tried out in the schools supervised by members of the committee: Art clubs, Assembly, Athletics (*a*) boys (*b*) girls, Camera clubs, Charitable and Welfare clubs (*a*) Junior Red Cross, etc., Class organizations, Debating clubs, Dramatics, Hiking clubs, Honor clubs and awards, Language clubs, Music organizations (*a*) choruses and glee clubs (*b*) orchestras and bands, Pre-vocational clubs (*a*) home training (*b*) industrial arts (*c*) agricultural, Publications, Science clubs, Scouts (*a*) boys (*b*) girls, Student Council, Thrift organizations.

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7. *Annual* of Ben Blewett Junior High School, St. Louis. Detailed description of organization of activities. Very good.
8. Earning the School Emblem. *School Review*, 28: 491–2, Sept., 1921. Excellent plan for awarding school letter for merit in scholarship and citizenship, as well as athletics.
9. "Handbook," Washington Irving High School. Divides into many department names. Good.
10. Pound, Olivia: Social Life of Junior High School Girls. *School Review*, 27, Jan., 1920. Turning into useful channels the energies of club members whose clubs were put out of the school, thus raising social standards and giving better training for citizenship.
11. Briggs, Thomas H. "The Junior High School." Chap. X, 245–53.

A NEGLECTED OPPORTUNITY OF THE SUPERVISOR

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In general the supervisor is much concerned about certain methods of teaching that seem to her to be indispensable. In insisting that these methods be developed she is, properly enough, thinking of special educational outcomes that she desired to get through effective instruction. The benefits that follow such craftsman-like zeal are very great, and no one can wish for less of it anywhere. The success of teaching, however, must be acknowledged to depend rather heavily upon the general existence of a substratum of habits in regard to certain humble matters of routine which may be called *conditions* of teaching. They are merely details of procedure, involving definite habitual responses, which should be early *established* and faithfully adhered to for the sake both of the pupil and the teacher.

Now, the absorption of the supervisor in the establishing of fruitful habits of teaching frequently goes with—not a *conscious depreciation* of the values of unvarying system, routine, mechanism, but an *obvious neglect* of time-saving habits in matters that are best done in a given way by everybody in a given group. A school system is a coöperative unit, where the work of no efficient teacher should negative or lessen the value of the work of another efficient teacher. Having different ways for pupils to perform certain recurring activities may and often does cost the system heavily in efficiency. A child learns one way of doing in one grade and must learn another way when promoted to a higher grade. This is hard for the child, since it means his unlearning the way he knew and acquiring a new way. It is hard for the teacher, who must disestablish one habit and establish another, likely no better.

Follow a child through a given school system; enumerate all the changes of habit he must endure; and then if you can, compute the waste involved for both child and teacher. For example, he may learn in one room, for one term, to keep his written papers flat with his name in the upper right hand corner. The next term he may have to add the date to his name, and write it all in another place on the page for his next teacher. The same teacher may decide during the term to have the child fold his papers and to write his name on the outside, at the top, or the middle; to have the name written from the folding place outward or the reverse, with the date or without it. Teachers vary greatly as to what they demand in respect to margin, amount of indentation for a paragraph-beginning, on what line the first word shall be written, and so on. In spelling, one teacher may have the word first pronounced, then spelled, then pronounced; another may have it merely pronounced before the spelling or after it, and still another teacher may allow the child to spell without pronounciation of the word at all. One teacher has her children use the Austrian method of subtraction, and when these same children go to the next grade they may have to use the other method of subtraction. When the child begins at long division he will have to place his quotient at a certain place only to learn another place for it in his next grade. These are but a few of the hundreds of changes of routine procedure which the child from grade to grade must constantly be making.

Think of what this means. In the first place it undoubtedly means an emotional disturbance. The child is inevitably annoyed. He must be on his guard all the while. Even then some of his old habits assert themselves. If the teacher is not consistent in her demands—and she often is not—she will find in her pupils of the same class a variety of procedures. Moreover the children are apt to grow slovenly in respect to these details and to develop responses that are strange combinations of two or more habits. Often the child may have to hesitate in order to choose between the several ways which he has learned of doing this or that. There is nothing so demoralizing to any one as uncertainty.

In matters of routine there should be no need of choice. The learner should proceed automatically so as to be free to expend his attention and emotions on matters of new experience. The pupil who must change constantly his routine procedure inevitably gets a notion that his teachers are whimsical. He can see no good reason for the constant change in these routine matters. And, as a matter of fact, there is none.

Many principals of course have become aware of the problem pointed out above and so, indeed, have many supervisors also. One may find some of the above mentioned factors pretty highly standardized in a few school buildings. But it is not enough that these matters be standardized merely for each building. Within any city the emigration from school district to another is very great. To be effective these modes of routine procedure should be standardized for an entire school system, better still for the entire nation,—if indeed in any case we know the best procedure. That, no doubt, is a question for the National Education Association. With regard to the smaller problem, however, there can be little question. The teachers and the principals of a given building should agree upon the most desirable procedure in each case, and the supervisors and principals of a given system should also agree. After this, it would seem desirable to have representatives from the various cities work upon standards deserving to be applied more widely. Likewise in the rural schools where the problem is all the more urgent there could be developed standard methods of procedure in these routine matters.

Of course, even in a building, and certainly in a system, there will be teachers who on first thought will resent such standardizing of procedure. They will interpret it as crushing out initiative. It is likely, however, that better fields for initiative than those mentioned, can be revealed. Routine is to *free* energies for work *requiring* initiative. Teachers, after they have become practically familiar with the fundamental laws of learning, will feel the value of system more keenly. Tactful principals and supervisors can lead these teachers to see the necessity of such standardized procedure; that such uniformity of routine is not only of great immediate value to the child but that it is a necessary time-saver for the teacher; that it frees the teacher from untold waste of effort in retraining children. In short, to have these routine matters standardized is to free the teacher to develop on her own and the children's part far more initiative.

It is the writer's conviction that one of the greatest opportunities which the supervisor has is in this field. The teachers would be much happier and the children better learners if all the supervisors recognized the educational value of routine. Among the laws of learning the supervisor can perhaps be surest of enforcing is this: "Allow no exceptions to occur in matters of routine."

AN ENGLISH VIEW OF TEACHER TRAINING IN AMERICA*

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I. Introduction

American opinion with regard to the expert is elusive. In some fields, more particularly those in which scientific knowledge is needed, such as agriculture and manufacture, his worth is recognised and his place assured. In parts of the educational field, too, he has come into his own as the university courses in the administration and supervision of education testify.

Statistics show, however, that apart from the administration and supervision of education, the expert is far from universal in the teaching field. In secondary education the prerequisite is academic proficiency,—"pedagogy" is despised by most teachers in high school. Perhaps this is partly because of the memory of the "methods-without-content" courses of their past normal school days, and partly, because of a certain snobbishness even in this democratic land: the normal school prepares for the elementary service,—and the high-school teachers have progressed to the rank of university graduates.

In the elementary field many forces are at work determining the part that expertness shall play. In the first place, there is the local opinion that "the job belongs to the girl on the spot" rather than to any other, be she ever so well trained; secondly, there is the opinion that the work is ill paid but will fill in the gap between school and marriage; and finally there is this elusive general opinion that the recognition of inherent differences is undemocratic. The result is that to-day only one-fifth of the American teachers meet the meagre standards of training represented by graduation from a standard normal school.

In the face of this the normal schools have fought an uphill fight to secure the recognition of the need for the trained expert in the teaching field. Some have gone over to the democratic ranks, especially is this so in the West, and become centres of academic culture, and caterers to the needs of the ambitious individual. Others have planted their feet firm, and saying, "thus and so is the custom," have refused to admit any real culture to the curriculum at all—to them "training" is apprenticeship. Others, few now but growing in numbers, represent the tomorrow of American teacher-training and a splendid morrow it will be! Their program is (1) State teachers' colleges preparing for all parts of the teaching field; (2) four years free training; and (3) the needs of the individual and of the calling rightly balanced.

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II. METHODS AND SCOPE OF THE INVESTIGATION

In securing the information necessary for the discussion of the nature of teacher-training in America, and its possible values for England three lines of investigation have been followed: (1) visits to American training institutions and schools; (2) classes and personal conferences with members of the faculty of Teachers College, Columbia University; conversations with members of other faculties and with fellow-students; (3) study of books, journals, normal-school catalogues and current educational literature.

1. The following schools have been visited: The state normal schools at Newark, Montclair, and Trenton, New Jersey, and at New Haven, Connecticut; the two city training schools of New York City, and the normal classes of the Ethical Culture School, New York City; the high school and Gary school, Passaic, and the primary schools and junior high schools of Montclair, New Jersey; the public schools, No. 4, Bronx, No. 10, and No. 32, Manhattan, New York City; the public schools used as demonstration schools in New York City, and New Haven; also private and experimental schools: The Social Motive School, Horace Mann School, the Lincoln School, the Riverdale Country Day School for Boys, the Friends' School at Oakwood, N. J., and the Ethical Culture School.

2. As regards the psychological and philosophical bases of the methods and organization of American teacher-training, I have been privileged to study the former under Dr. E. L. Thorndike and the latter under Dr. W. H. Kilpatrick, the eminent exponent and developer of the Dewey educational philosophy. For the actual normal-school situation, I am indebted to Dr. W. C. Bagley, and after many suggestions as to the values for England, to Dr. I. L. Kandel.

In visiting schools I was much impressed by the uniform kindness and helpfulness of the principals, faculties, and students, with their desire to help me in understanding and estimating the worth of their organization and methods; and with their readiness to discuss differences. One vice-principal of a city training school gave an hour or more of her valuable time helping me to unravel the place and function of the critic teacher; another, the busy president of a normal school, explained his whole theory of training and illustrated it from the catalogue, from classes he took me to see, and from the equipment of the class-rooms.

Finally the group of students who have attended Dr. Bagley's classes in Normal School Administration have represented among them fourteen different States, and contained three normal school presidents, three university associate professors, one dean of women, eleven normal-school instructors, five supervisors and critics, and two superintendents. Thus, every type and aspect of normal school has been represented and this has secured "all-roundness" in class discussions.

3. As regards the books and current literature consulted, each reference has been given in the text so there is no need to enumerate them here, except, perhaps, to mention the particular value of the Carnegie Foundation's Bulletin No. 14, "The Professional Preparation of Teachers for American Public Schools." It can be obtained from the office of the Foundation, 522 Fifth Avenue, New York.

III. GENERAL CONCLUSIONS: WEAKNESSES OF THE AMERICAN SYSTEM

The faults in the American system are in my opinion: (*a*) the belittling of academic work; (*b*) divided counsels in the practice-teaching of the students.

(*a*) *The Belittling of Academic Work.*—In the city training schools and some normal schools no academic work is attempted. Instead short "review" courses in the subjects of the elementary-school curriculum are given. The methods followed are extremely practical —nothing less than the same series of lessons which will be given in the elementary schools, the only difference being that the students take the part of the children—with great spirit—now of one grade, now of another, and one of their number or occasionally the instructor is the teacher.

I came across excellent illustrations of this while visiting the teacher-training institutions. In one, I saw three students give in turn a rapid drill lesson in geography to their fellow-students, the subject being the location of places on the map of the United States; later in the day I saw a similar lesson given by a critic teacher to the seventh grade in the model school. This teacher and her well-drilled class "located" Asia in four minutes and South America in three and one half minutes! The students could not talk or point so quickly but that was the sole difference.

The faults of such a system are self-evident. (1) The immediate future alone is being cared for: this is done by provision of a sequence of teachers who will keep the schools going on the "good old lines." (2) The needs of the future are disregarded. With complete lack of educational vistas, ideals, philosophies, what will these teachers be able to contribute toward shaping the conduct of the schools to meet the changing needs of the people? (3) Finally the present needs of the students are neglected; they are having no cultural work at all save what is provided by courses in psychology and, occasionally, in history of education.

In the normal schools varying degrees of academic work exist. (1) As in the city training schools, none at all; (2) complete cultural courses as in the colleges; (3) vocational-academic courses; (4) professionalized academic courses.

1. In the Western States the normal schools are, for the most part, modeled on the colleges rather than on the city training schools, and the individual students may choose their own program of studies—often from a bewildering array of subjects. For example the five State normal schools of Missouri offered in 1917–18, an average of 19 courses each in education, 6 in English, 9 in agriculture, 8 in mathematics; 12 in history, 13 in ancient languages, 8 in modern foreign languages, and 9 in music, to say nothing of liberal offerings in other fields.

For brevity's sake I give only the titles of some of the courses listed under history and political and social science. They are as follows:

Ancient history
European history
English history
American history
Current history
Missouri history
History of the west
Latin American history
Method of teaching history
American government
Government of England
Comparative government and international politics
Diplomatic relations of the United States
Political economy
Sociology
Party government
Economic history
Economic geography
Public finance
History of economic thought
Commercial law
Rural economics

This plan of an elective program rather than a curriculum is held by many to be the truly democratic organization, as it meets the needs of each individual. It has, besides, this great advantage, that it does provide cultural courses of study,—it stresses the need of culture in would-be teachers and of that we cannot have too much. But in getting away from the apprenticeship system of teacher-training it has tended to forget that training is as essential as culture in the making of a teacher, and the very violence of the swing away from the earlier type has brought a natural reaction. The fact that students, by this plan, are free to choose what they will and may easily be guided by ulterior motives such as place in the time-table, personality of the instructor, choice of friends, whether the subject will be accepted for credit toward a degree in college, has inevitably brought it into well-deserved discredit with those who see the needs of the schools.

2. A plan which is to be found more particularly in the North Eastern States stresses the vocational nature of the normal school. "Studies are selected for the value they are believed to have for prospective teachers rather than for their quality of pleasing students."[1] The curriulum of the State Normal School, Platteville, Wisconsin, shows the new character of the organization—namely, a cultural background to meet the *newer needs of the schools.* This purpose is shown in the following citations from the catalogue:

> "American literature required of all students who are preparing to teach in the *upper grades.*"
>
> "Juvenile literature required of all who are preparing to teach in the *primary grades.*"
>
> "Geography for *lower grade* teachers."
>
> "Geography for *upper grade* teachers."

The three State normal schools of New Jersey afford excellent illustrations of this type of organization of courses. Far removed from the city training school and old fashioned normal school on the one side, and equally far from the collegiate normal school on the other, they are doing excellent work in the training of teachers capable of meeting the most modern needs of the school such as the conduct of the socialized recitation and of the problem-project method. But at the same time the standard of academic work is poor. "Literature for the Primary Grades" is not sufficient for the spiritual and intellectual needs of students.

3. The planning of the curriculum on the basis of professionalized

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[1] *Catalogue* of the State Normal School, Milwaukee, Wisconsin, 1914–1915.

subject-matter courses is best described in the words of the Carnegie *Bulletin:*

(*a*) "Mastery of method in a given material is after all little more than a clear consciousness of the way in which the material shapes itself most advantageously to the learner. There should be, therefore, no question of teaching subject-matter and methods simultaneously as diverse objects of attention; it is rather a matter of utilizing the actual experience of the student in learning in order to throw light upon his later problem of teaching. . . . The student's experiences in learning or relearning will form the best concrete basis for an understanding of the special 'pedagogy' of the subject. While these experiences are fresh, they should be studied and discussed to the end that they may be registered in the student's mind and be subject to recall when he himself essays the teacher's task. Then his whole education sensitizes him to the learning process; it is not too much to say that the skilful teacher is one who can recall most clearly the successive steps of his own mastery and through these reconstruct in imagination the situation which the pupil is facing" (p. 231).

This appears to me to be a contribution of extreme value to the art of teacher-training. It provides for a full academic course—within the limits of usefulness for the schools—and at the same time secures its right professional orientation. All such crippling limitations as "for the primary grades," "for the upper grades," are swept away and the intrinsic dignity and worth of the matter itself recognized. Literature is literature, and history, history. But where the lecture method and uncommented-upon reading will do for the college student they are unworthy of the future teacher who must understand *through his own experience* what are the right ways and wrong ways—and why right or wrong—of studying different subjects.

(*b*) *Divided Counsels in the Practice Teaching of the Students.*—In the majority of normal schools and city training schools the functions of the instructors in the theory of teaching and in academic subjects on the one hand, and the functions of the supervisors of practice teaching on the other hand are quite distinct,—and not infrequently the relation between those two sections of the staff or "faculty" are critical and disparaging.

Mr. H. A. Sprague, Supervisor of Practice in the State Normal School of Newark, New Jersey, writes[1] that, judging from data from

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[1] In Vol. XVI of the *Journal* of the National Education Association, 1918.

27 normal schools in 22 different states, there is "practically little or no direct relationship provided between their departments of theory and practice . . . in 32 per cent the theory teachers do not attend the *demonstration exercises* that are given . . . in 5 cases there is a very direct relationship between the theory instruction and the students *organized observation* . . . in 65 per cent of the schools studied theory instructors have nothing to do with the students' *plans for teaching*."

The relative importance of the two sections of the staff as measured by their salaries is illustrated by the following quotations from the Carnegie *Bulletin:*

> "The median average salary of the critic teacher in 46 State normal schools was $1036 while the median average salary of academic teachers in 36 State normal schools was $1488. (In 1917.) In the Missouri schools the salary differences are not so noticeable, but the differences in training are striking; while 93 per cent of the teachers of academic subjects have the equivalent of four years collegiate education, only 57 per cent of the supervisors have as extensive a background for their works."

This separation of functions and difference in status has an unfortunate effect on all concerned. An illustration from one of the City Training Schools should make this clear.

An enthusiastic instructor and a class of second-year students proceeded to the study of history. The method followed was the usual one in the Northeastern States, namely a student giving prepared lesson to her fellow students. The lesson was followed immediately by criticism. In talking things over afterwards with the instructor it transpired that that group of students would have four history periods a week for two weeks in preparation for two weeks' practice-teaching in the city schools and would then return for two more weeks of theory, and so on. During the fortnight of practice the theory instructor would have no control over the students' work.

The effect of this separation on her own work was apparent in the criticism of the student's lesson in which faults were passed over which would have been noticed if the instructor had been in close touch with the schools. For instance the artificial preparation, the obtrusive aim, the misuse of illustration and of description were ignored, nor were other possible plans of presentation commented upon and the student called upon to justify her selection.

From the point of view of the students, time was being wasted: they were spending four periods a week in hearing each other give lessons in history when with infinite advantage to themselves and their future vocation they might be learning some history. But this system is not only wasteful of students' time, it is also wasteful of their effort, for, having learned the responses to one situation comprising theory instructor and fellow students, they have to transfer this training to the very different situation of critic teacher and children, and only a very small part is transferable so that the learning process has to be begun all over again.

The ill effects on the critic teachers are not so apparent but the position of inferiority which they occupy in all save a few normal schools and training schools must, by thrusting upon them a perpetual condition of negative self-feeling, react unfavorably upon their work and personality.[1]

Even the leaders of American educational opinion who deplore the division between theory and practice and the inferior status of the critic teacher are not prepared for her removal from the educational hierarchy. They would have close coöperation and equality of status and through their influence this is coming to be more and more the state of affairs—but that is all. In their opinion the critic teacher is indispensable and for the following reasons: (1) the large number of students to be provided for (1100 in the Brooklyn Training School, for example) necessitates specialization; and (2) the fact that the academic teachers are not qualified to supervise the teaching of the elementary-schools subjects.

To my thinking the first objection to her removal could be met by skillful planning or by smaller training schools and the second by the insistence upon all members of the faculty being qualified by experience, training, and general knowledge of class-room technique to teach the elementary branches of their own subjects and to criticize the teaching of the other branches of the elementary curriculum.

The causes of this unfortunate separation are partly historical and partly fundamental. Its roots are to be found in the apprentice system out of which teacher-training grew and which was closely paralleled in England by the pupil-teacher system of training in the last half of the nineteenth century. In the constitution of the first normal school of Massachusetts it was arranged that "the actual exercise in the business of instruction" should be under the supervision of the head of the practice school. In process of time first the model teachers and then the critic teachers have been added to the list of supervisors. This separation still survives in England in the student-teacher year of training previous to entering the training college and in the training of most secondary teachers. But it is more than historical. Tradition as such has little weight in perpetuating practices in America. Rather it is experiment that is loved and sought after for its own sake. As I see it, this separation has survived for two reasons: (1) America is indifferent to the contact of mind with mind as an educative factor and (2) loves organization.

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[1] This, of course, does not apply to the critic teachers in the training institutions where there is no difference in status, such as the Brooklyn Training School for Teachers and the New York Training School for Teachers where assistant theory instructors, critics and model teachers all receive the same salary, nor in New Haven where from what I saw and heard in both normal school and model school it was evident that the best relation existed between the two,—sincere respect and mutual coöperation. In these three training institutions the members of the faculty whether on the theory or practice sides were at home in their world, taking the value of their work for granted and living richly in it.

The appeal of separation of functions to the latter quality is very strong. The organization of the "model," "practice," "training," or "campus" school can be more complete if theory instructors with their difficult-to-adjust programs are ignored and supervisors used in their stead.

Indifference to the part played by the interaction of a mature with immature minds seems to me to be implicit in the whole educational system of America, as I have seen it. The interaction is rather between immature minds. The problem-project method, the socialized recitation, student government, the lack of any tutorial system in the colleges and universities are all apparently the outcome of this belief that the individual educates himself and his peers. This being so, the student is regarded as always the centre of activity and whether he is in the presence of this or that personality on the staff matters very little.

IV. GENERAL CONCLUSIONS: ELEMENTS OF STRENGTH IN THE AMERICAN SYSTEM

(*a*) *The Practical Nature of the Training.*—The central fact of the teacher-training situation in American is the belief that "teachers teach as and what they have been taught."

This fundamental theory is catholic in application: it ranges from the model-lesson method to the professionalized subject-matter method, and is to be found in one form or another in all teacher-training institutions from the city training school to the collegiate type of normal school. One aspect of the theory is set forth in the Carnegie *Bulletin* (p. 249):

> "The initial skill of the teachers who are sent out from the normal school will depend in no small measure upon the teaching to which they have themselves been subjected. It is true that the demonstrations of good class work in the laboratory school are intended to furnish such models but the actual teaching in the normal school classes is of even greater significance."

The same views, with regard to the practical orientation of methods of procedure in the normal school are held by the mature students, many of them holding positions of great educational responsibility, who were members of the class in Normal School Administration at Teachers College.

This aspect of the theory is, however, not confined to Teachers College. Dr. L. M. Wilson of the State Normal School of East Illinois, writing in *Educational Administration and Supervision*, Vol. IV, says, "Teachers teach as and what they have been taught." Dr. L. D. Coffman, now President of the University of Minnesota, speaking at the meeting of the National Education Association, 1918, said "Formalism in instruction is doomed. A new curriculum with new materials and in vital contact with the shifting currents of social life will not permit of the *disassociation of method from content.*" I met it also in the State Normal School of Montclair, New Jersey, where the history instructor defended American practical courses against the more academic English type. She contended that the work was "consciously" arranged on those lines so that students might apply the same methods in their own class-rooms. In its more restricted form it underlies the methods of the city training schools, and normal schools which have kept closest to the source from which they all derive: apprenticeship, which is innately practical.

It is not surprising that the theory dominates the city training school and professionally progressive normal schools of the Montclair type. But what is astonishing is that the normal schools of the West with their strong academic trend are also under its sway. In the survey of the Missouri schools the report on the character of the teaching reads,—p. 248—"The lecture method is little in evidence even in the normal schools of the collegiate type. In fact the infrequency of the lecture and the prevalence of the class recitation and discussion constitutes the most noticeable distinction between the [normal] schools and the liberal arts colleges."

This belief has helped to produce the essentially practical nature of teacher-training in America. It is the source of its most distinctive features, such as student government, the emphasis on experimental and inductive work, the practical nature of professional syllabi, the position accorded to the campus or laboratory school, and the classroom methods of the normal-school faculty.

At the outset it must be stated that with regard to these characteristic features there is to be found, as has been indicated in dealing with the faults of the system, a wide range from the unprogressive to the modern. But having already pointed out the faults of the system —as I see it—I shall not dwell further upon them. My object is to get at the practical values of the American teacher-training system—not to appraise it comparatively.

(*a*) *Student Government.*—"How shall we develop character, initiative, resourcefulness, judgment and civic virtues in His Majesty, the American Citizen? . . . the teacher who would develop freedom and independence in her pupils must have had *experience in the practice of* these civic virtues."[1]

In the State Normal School, Trenton, New Jersey, this "experience" begins in the dormitories (hostels).

> "In order that the life in the dormitories may provide the largest opportunities for growth in self-control, the government of the students is administered by a Council of eight members elected semi-annually by the boarding students. This Council derives its authority to enforce the rules and regulations adopted by the students from Article II of its constitution which states the purpose of the Student Council of the State Normal School Dormitories at Trenton as follows:
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> *Purpose.*—The purpose of this Council shall be to plan and develop through their own efforts, and with the *advice and aid of the principal and faculty*, a well-organized and reputable community that will command the respect and confidence of the State, to preserve hours of study, to secure habits of industry, to regulate conduct in town, attendance at church, and other institutions, conduct in traveling, and all other matters that pertain to the welfare and refinement of a well-regulated household, and to constitute a medium of expressing the opinion of the students on matters of general interest."[2]

At Farmington, Maine.—

> "the conduct of the students is guided by a small number of regulations which have been carefully discussed and adopted by the student body. Student government is exercised through a Council of six students and the Principal. The students are elected by the classes, three from the first year and three from the

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[1] *Journal* of the National Education Association, 1918.

[2] *Catalogue*, State Normal School, Trenton, N. J., 1920–1921.

> second year. *The Principal is the executive head of the Council.* All matters of discipline and all questions of government are first considered by the Council which either acts finally on a proposition or refers it to the whole school."

From a brief survey of normal-school catalogues it is evident that in the South student government is not usually recognized. In these catalogues the rules are listed and penalties for their breach given. In the West the catalogues reveal little of what is implicit in their whole system—what is so well known needs no comment. The catalogue of the State Normal School (near the State Teachers' College) San José, California, raises the matter only to dismiss it:

> "The student body organized *with the usual powers and instruments* is an efficient *factor* in shaping and dealing with student affairs."

A wise word on the limitations of such a form or organization has been said by Mr. E. D. Randolph, in the Colorado State Teachers' College *Record*, August 1920:

> "The term student government is not a good one, however; its place would be more readily recognized if its actual function were described, perhaps in such a phrase as 'student coöperation in school organization.' In the end it is clear enough that those must organize and govern who are responsible for the characteristic purposes of the organization. Functions, the exercise of which are both educative and capable of delegation may properly be referred to students as coöperators."

The extracts from the catalogues given above illustrate that student participation in school organization rather than government by the students is what actually takes place. The importance of this is brought home when we remember the havoc that can be wrought in school morale by a too sanguine and untried belief in the virtues of self-discipline. Students educated wisely through coöperation with the members of the faculty in all that belongs to the welfare of the community will help to create that progressive stability in school and class-room which is unknown to one trained under an autocratic system or left to "govern" without the guidance of those whose duty and privilege it is to hand on the social inheritance as embodied in habits, customs, and institutions.

(*b*) *Experimental and Inductive Work.*—The students learn the value and limitations of heuristic work by finding out and formulating their own theories and generalizations. This takes place mostly in sociology, psychology, educational measurements, and principles of teaching.

Dr. F. W. Smith of the City Normal School, Paterson, New Jersey, has organized the work in sociology so that "*Concrete and effective sociology* is supplemented by a course in general sociology." The students study, "(1) the city racial groups, their fundamental stocks of ideas, their personal characteristics, their attitudes towards education—ways of approaching them; (2) city industrial groups; (3) neighborhood groups through community centres; parents clubs, library circles, churches, etc.; (4) child groups and individual children on the basis of age and nationality." Much the same is apparently being done at the State Normal School, Oshkosh, Wisconsin by Mr. H. A. Brown.

Dr. L. M. Wilson, formerly of the State Normal School, Charleston, Illinois, not only organized the work in psychology on these experimental lines but also placed such courses early in the curriculum to lead up inductively to the more formal courses which "should give methodical formulation to many principles with which the student has gained an acquaintance in a more empirical fashion in the earlier course." His description of the earlier course is as follows:

> "The prime consideration in the introductory course will be to develop certain habits rather than to give certain information. . . . In the Normal School at Charleston the classes met five times a week, covering the usual work early so that during the last twelve weeks of the year three days a week were spent in the training school and two days in discussion conducted jointly by the principal of the training school and the instructor in psychology, in which it was attempted to make the students think 'psychologically' about the work of the training school. The critic teachers took part in the conduct of this twelve weeks' work. . . . Active participation needs to be added to even well devised and well directed observation before such a course can reach its maximal usefulness."

At Boston, Massachusetts, and Louisville, Kentucky, the students do practical and experimental work in educational tests and measurements. They coöperate with the directors of educational research in giving tests in the public schools of the city, correcting the results, and helping in the statistical tabulation. At Louisville, they are free of the Research Laboratory and carry on any individual research work they wish under the supervision of the director.

In the courses in principles of teaching and school organization, the experimental method of approach is much advocated. Dr. H. A. Brown, when Director of Educational Research for New Hampshire and also Inspector of New Hampshire Normal Schools there, advocated what he has now established at Oshkosh, Wisconsin:

"Everything should be related to actual situations connected with real school work. All that is merely theoretical should be excluded. The principles of teaching should be learned largely by purposeful activities."

The experimental work done in the graded practice-teaching courses of North Dakota and Kansas is paralleled by courses in the theory in which the problems of the student are the starting point for discussion. In this work, too, the courses are arranged inductively so as to lead up to the final theory courses at the close of the practice teaching.

(*c*) *The Practical Nature of the Syllabi.*—The content of the professional courses is largely determined by its practical value. This is not to say that the need for building up "interpretive background, points of view, appreciative attitudes" is neglected. But a distinction is made between the syllabus of the students who will have four years of professional training, and who are looked to furnish the educational thought and policies of the future and of those who will be in college only two years, who will form the rank and file of the teaching profession and many of whom will not remain long in it.

For the latter there is not time for general psychology, academic history of education, or full courses in educational psychology. Yet it is recognized that no one can be a good teacher without some of the background that these studies give and which enable the teacher to follow leaders intelligently.

To meet this need valuable constructive work in syllabus-making has been done in the immediate past. One of the most interesting of these courses is the "Introduction to Teaching" course. The basic idea is Dr. Bagley's and its practical success was attested by the President of one of the Pennsylvania normal schools—Mr. Fisher— who gave a full account of it in operation and stated that in his opinion it would revolutionize the attitude of students toward their work. As he described it, it was an interesting illustration of the worth of the project-method. Each student's work was a purposeful activity which furnished her with aim, guided the process and supplied the driving force. Mr. Fisher testified to the difference in the attitude of the juniors who had had the course at the beginning of their college career and that of the seniors who had not had it.

The course as given pointed out the different types of educational service possible for students training in that normal school. These fields of service are four in number: (1) the primary grades; (2) the elementary grades above the primary; (3) the junior high school; (4) the rural school. The work of the introductory course was closely correlated with the training school which afforded examples of the first three types, and visits were made to rural schools in the neighborhood. At the end of the course the students chose the type of work for which they wished to be prepared.

The choice made was as follows: primary service 30; elementary service 44; junior high school service 40; rural service 17. Thirteen students were advised to take work other than that they had chosen and this was in Mr. Fisher's opinion a valuable illustration for the whole group of the ethics of service: that each should give the community the best of which he is capable. Only one student stood out and it is left to her to show whether she can pull her standard of scholarship up to the level of junior-high-school work. The students who chose the rural work were in most cases the strongest in the group as the difficulties of the rural teacher had been honestly dealt with, while the great importance of that service in the light of conditions and statistics had been shown.

Such a course rightly handled must give these two year students a glimpse, at any rate, into the field of educational philosophy, and so make their work meaningful and satisfying.

In history of education courses, too, some pioneer work is being done. Instead of the older syllabus, dealing with great reforms and great movements, there is substituted the history of the choice of the various subjects for the curriculum, and the evolution of methods of teaching them. They have their place in the syllabus of the subject itself as part of the professionalized treatment of content.

One of the chief criticisms on English teacher-training that I have come across here is that the content and treatment of psychology is so meaningless.[1] In America the emphasis is being laid more and more upon child-study both for an understanding of the original tendencies of human nature and the ways of cherishing, modifying or inhibiting these, and also for a sound understanding and application of the laws of learning. From such a study of childhood is gradually built up—as was shown in the last section—the theory of education.

(*d*) *The Central Position Accorded to the Training School.*—The training school is an essential feature of all American training institutions. With the increasing demand—the result perhaps of a sound psychology—for more and better organized practice teaching, the normal schools are beginning to avail themselves of the laboratory facilities offered by the public-school systems—where such are available. But even in the city training schools, the students of which are in great demand as supplementary teachers in the city schools, the model or training school remains "the heart of the normal school."

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[1] See C. H. Judd, U. S. Bureau of Education, *Bulletin* No. 35, 1914.

Its chief functions in the training of students for the teaching profession are recognized as follows: (1) it forever draws attention to the life of the school as all-important in the life of the community; (2) it provides facilities for practice-teaching; (3) it motivates the work in the theory courses of the normal school.

1. In order that the school may always be first in the students' thoughts, the demand is made that it shall occupy the best site and its equipment must be considered first. Of the schools visited by me those attached to the State Normal Training School, New Haven and to the City Training School for Teachers, Brooklyn, most nearly met this ideal. In the latter the training school lies behind the normal properly so called, but is an integral part of the same building and constructed on exactly the same lines. At New Haven I saw only one of the three training schools. It was a particularly pleasant building,—light, airy, and excellently equipped. In both of these training institutions the model school is part of the public-school system and is therefore identically the same type of school as those in which the students will afterwards be called upon to teach.

2. At present the chief function of the training school is to provide for observation and practice-teaching. This matter is receiving much attention and many varied schemes are being worked out both experimentally and on the basis of investigation and theory.

An example of the former type is the scheme published in "*Educational Administration and Supervision*" 1919: Gradation of Practice Teaching, by Miss Frances V. Mason; and of the latter is Dr. W. A. Wilkinson's article on Graded Practice Teaching in the same journal for 1918.

Miss Mason is a critic teacher and the scheme was worked out by her in the school room. Her students pass through four stages: (1) receiving instruction upon phases of class-room procedure; (2) participating with her in the general over-sight and work of the class room; (3) taking small groups of children of varying ability in order to work out the technique of teaching without any thought of discipline; and (4) actual class-room responsibility for a definite period.

Dr. W. A. Wilkinson's scheme provides for a two year course in graded practice teaching. Each year is divided into three terms and the work falls into three stages: (1) observation and participation (one term, 12 weeks with five periods a week); (2) participation and group teaching (three terms, 36 weeks; with five periods a week); (3) concentrated room teaching (one term, 12 weeks, 15 hours a week). During the sixth term a course in the principles of education is given, its main purpose being to help the students to formulate a somewhat systematic theory of education based on their five term experiences in the schools.

A scheme similar to the above has been worked out at the State Normal School, Emporia, Kansas, for the preparation of high-school teachers. In it also the practical work of observation and participation and teaching leads up to a final summary course on the principles of education.

3. Lastly the training school under the influence of modern educational philosophy and psychology, is called upon to motivate the instruction given in the theory courses.

At Charleston, Illinois, psychology as taught by Dr. Wilson was largely carried on in the training school. Sociology is motivated by studies made in the training schools of Paterson, New Jersey, and San Francisco, California; Educational measurements and class-room organization and technique are started in or run side by side with work and observation in the training school.

(*e*) *Classroom Methods of the Instructors.*—Dr. W. W. Charters advocating in "*Educational Administration and Supervision,*" 1918, a survey of specific methods with a view to the dissemination of the best, says, "The strategic point in all education is class room teaching." This view is well sustained by the importance attached to class room methods in the training of teachers as shown in the earlier sections of this paper. It is the outcome partly of the characteristically American practical turn of mind and partly of the origin of teacher-training in apprenticeship where the novice is placed under a master workman in order to learn the required skill. It is this latter factor which is responsible for the most modern theory and practice which is responsible for the most modern theory and practice as exemplified in the professionalized subject-matter courses.

The three distinctively practical methods used in American training institutions are—(1) the lesson given by a student to her fellow students, (2) the socialized recitation or group-work, (3) professionalized subject-matter. Others also valuable but more familiar are: discussions and debates.

1. The first lesson-giving has already been illustrated but to leave it without further comment would be to ignore the really excellent results gained where it is regarded only as a means to an end.

At Montclair, New Jersey, I saw the method used so as to lead inductively to the formulation of pedagogical principles with regard to "aim" and "organization" in lesson planning. Four students gave in turn a recitation lesson each taking a different poem from "A Child's Garden of Verse." The poems chosen were,—the Wind, My Shadow, Bed in Summer, Sailing Boats. Criticism followed each lesson and the students—the top class in the normal school—proved very competent critics.

The instructor emphasized as the chief fault of the first, failure to secure coöperation of the "children." This weakness was absent from the three following lessons. From the second student's lesson, she pointed out failure to get sequence of ideas and to achieve the aim. When the third student also failed to secure sequence the instructor suggested the getting of titles for the stanzas as a remedy. The fourth successfully avoided these pitfalls and gave a delightful and deservedly praised sketch lesson on Sailing Boats. Taken in this way with its limitations acknowledged, the lesson methods is both valuable in giving practice in the art of teaching, and in giving concrete illustrations of the principles involved.

2. *Group work. The "socialized recitation."*—I saw this first in one of the New Jersey normal schools, where the instructor in geography explained the organization of project and group work in her classes. The subject-matter to be covered is wide—no less than the whole world—so at the beginning of the term she had allotted a part of it to each student: The students' preferences being taken into account. Those students responsible for sections of one large piece of work—North America for instance—coöperated. The material was then collected by the individuals and when complete was presented to the whole group in the form of a personal narrative. On the day I visited the school a student from the North American group was describing a camping holiday in the Adirondack mountains—a purely imaginary experience.

Other group work by this class is being done in relation to the geography of New Jersey. Here the instructor had taken a row of students—front to back of the class room—to constitute a group. The student whose name was first called acted as chairman of the group, her duties being to organize the work and report progress.

The chairman of the group responsible for the industrial life of New Jersey presented their report the afternoon I visited the class, immediately after the Adirondack experience was ended. In neither case did the students take notes of their fellow's report so that they were left without any record of the subject matter. Without doubt they were becoming familiar with a method of great value—the socialized recitation—but one with whose possible weaknesses they should be conversant before they can get the best out of it in their own class rooms.

At Trenton, New Jersey, I saw the preliminaries leading up to a piece of group work in English. The objects of the instructor were, (1) to help her class realize the background of knowledge needed for adequate appreciation and (2) to get a motive for group work by the class. She took the poem "Sir Galahad" and led up to Arthurian literature and chivalry. The subject was admirably handled and the class unanimous in its interest and desire to know more. The assignment for next day's class was twofold, (1) to come with suggestions for group-work on the King Arthur literature, and (2) to read "Stories as Told to Children" and "King Arthur of the English poets." This exercise was an excellent illustration of how to get a class working as individuals to secure a common end.

At Montclair the geography room had some interesting concrete results of student group work: The model of an English village; a model of the normal school with its campus and environs and an American village. While I was present a more extensive piece of group work than I had yet come across was developed. The instructor told the class that a geography exhibition by the whole normal school was being organized and to that particular class would fall the providing of exhibits for eastern South America. The class elected its own chairman, her duty being, as was pointed out, to organize and keep track of the work of the coöperating individuals.

3. Professionalized subject-matter does not reject the use of any of the methods mentioned above. Its appropriateness would be determined by the circumstances. But it emphasizes the importance of subject-matter in and for itself. It would be quite possible to mistake the English work and the history work just described for the newer method because in each class work of academic worth was going forward. It is only by discussion with the instructor and by studying the syllabus that the difference is brought to light. In both these instances the syllabus of academic work which the professionalized

courses stand for is lacking. At Trenton the English course aims at presenting

> "The personal problems of oral and written expression in such ways as will lead to the apprehension of the principles underlying methods of teaching language, to show what literature does for the individual and to make the students *acquainted with the best literature for children* and able to discuss and apply right methods of treating it in the various grades, and to enable her by basing all English work upon the mind of the child to become an effective teacher of the language arts."

The course in American history at Montclair

> "Presents a general survey of the rise and development of the American nation and includes a discussion of the methods of teaching history and civics in the primary and grammar grades, the study of curricula, the use of sources and illustrative material and a knowledge of historical bibliography. . . . The course consists of lectures, recitations, special topics, assigned readings, written reviews, story telling and class exercises in the conduct of the history recitation, projects, illustrative manual work and discussion of current history with the aid of newspapers, and magazines."

Here, as may be clearly seen, the course is heavily weighted on the method side. Furthermore, in actual practice, the instructor chooses the material which is "made most of in the schools." She would not admit any defect here and believes wholeheartedly in the course as planned.

The normal schools which have professionalized their academic courses are mostly in the West and this is where one would expect to find them, for the chief essential—full academic curricula—already exists and it is a less radical change to handle these professionally than to root out the methods courses of the East and put in academic courses in their stead. Furthermore, the West is more open to change than is the East and it is there that schools are still being established whereas the East is well supplied.

The underlying principle of all this is that the student must in her college days be surrounded by the atmosphere which she will help to create in her own class room and school. The worthy forms of discipline, the value of a coherent and sequential curriculum; the realization of the syllabus as servant not master; the all-importance of the school in the life of the community; and the right choice and handling of possible class-room methods—all these must have become hers through her own experience and not have been thrust upon her as a mass of precepts forever incapable of passing over into action. "Do as I say and not as I do" is not permissible in the normal schools of America.

V. SUGGESTIVE VALUES FOR ENGLAND

In estimating the suggestive value of American teacher-training for England, two matters of moment have to be considered: (1) the intrinsic soundness of the methods described in the foregoing pages; and (2) the possibility of their adoption into the English teacher training system.

1. On their intrinsic soundness it is not necessary to dwell at length as this has already been discussed in the previous section. These newer methods are apparently in line with a sound psychology and philosophy; if this is true, their soundness is beyond dispute.

2. The possibility of their adoption in England. President Canby speaking of Oxford and Eton says: "The enduring strength of British education is its grasp of the principle that nothing matters half as much as the meeting of minds," as the "living together of the mature and immature intellects."

America recognizes that she has nothing which quite comes up to England's best educational achievements but hers are very great though different. She has far greater equity of educational opportunity; far greater community in culture; and is much more advanced in the standardization of methods of teaching, measuring attainment, and school equipment.

England has a cultural group: in America, culture though of a lower standard is diffused; England has some universities and schools whose standards cannot be surpassed in the whole world: America has some public elementary and secondary schools whose standards of building, equipment, opportunity cannot be remotely approached by England—veritable palaces of learning for the use of all citizens.

The difference is that with us culture is still for the favored few, it still makes class distinctions. In America it is a necessity and recognized as such even though her immense immigrant and rural population groups gives her a problem of illiteracy with which England is not faced at all.

With such great differences in educational emphasis as exist between the two countries the difficulty of either country borrowing from the other is very great. Yet some such mutual exchange would be of greatest benefit to both. America might well profit by acquiring the English belief in scholarship and the English belief that the contact of mind with mind educates as nothing else can do. England has equally much to learn from America concerning equity of educational opportunity, sound educational psychology, and its practical application.

The particular theory and practice which is under consideration here is that of teacher-training—What might England—with advantage, borrow from America in this kind?

I submit:

1. That England needs the following:

(*a*) American educational psychology both for giving a right foundation for the whole system of training and also to form the subject-matter of the courses given in psychology in training colleges.

(*b*) American practical educational philosophy for the same reason, namely, to aid in the organization of the students' work and to equip them with the knowledge which will help them as teachers in making or guiding educational policies.

(*c*) American practical methods of training, namely: First the interaction of practical and theoretical work, the latter arising inductively from the former; secondly the use of socialized methods of teaching; and, finally, student government of the training college within those limits already touched upon.

2. That these, as the direct outcome of sound psychology, are admittedly right and in so far as any system of training lacks them it must suffer.

3. That difficulties lie in the way of England's adoption of these practical methods of training. These difficulties are two-fold: training college equipment and school organization. English training-colleges lack, for the most part, two essentials of this practical training—the campus school and the superb library equipment of the best American normal schools. The campus school is, as its name denotes, within the normal school grounds and classes of students can adjourn to it at any time for purposes of observation. It forms the laboratory for the building up of the theory of education and is the studio where the art of teaching is acquired through carefully graded practice. The students are equally fortunate in their book material. In many of the normal schools each student is furnished with all the required text-books free of cost; in others they are rented at a small charge. Moreover, complete sets, enough to supply one class with a copy of the more important reference books for each student are kept in the library.

Two illustrations will suffice to give some idea of these library facilities. The Brooklyn City Training School does not give academic courses, therefore the library consists, for the most part, of professional books. It contains 7484 volumes. Besides this material supplementary sets are kept in another room and 26 copies of the same book can be loaned at a time. Each student has a forty-minute period set aside in her time-table for the library and can put in as much more time as she likes and her work allows. The librarian gives an optional library course.

The normal school classes of the Ethical Culture School are exceptionally placed as regards library facilities. The total school library contains 11,000 volumes. Of these 1600 and more deal with education. The subjects represented are: Philosophy, psychology, child study, logic, ethics, religion, history of education, elementary education, methods. I counted 250 books on methods alone and only a few of these were duplicates. In addition a case is reserved for books put on special reference for the students by members of the staff. I counted 150 books there, including 24 on play. The total number of students in the classes is 44. There are 21 students in the Junior class, therefore each could read a separate reference book on the subject of play. Think of what that means as a background for class discussion.

The second difficulty in the way of the adoption of practical methods arises from the different school situation with which the American student is confronted on leaving the normal school as compared with that of her English sister. The average size of the American class is 35–40. (In New York it is much larger—nearer 50—but the New York public schools are exceptionally placed; a large part of the population sends its children to private schools, another large group sends its children to Catholic parochial schools and both these sections are indifferent to the welfare of the public school system of the city.) It would seem unwise to train students as if they would have to handle groups of 35 children when in reality 50–60 will be the size of the class, and this brings up the whole problem of the possibility of inductive training with a large group.

4. That though these difficulties will have to be contended with if the practical elements are to be introduced into the English teacher-training system, in two respects, and these very important ones, the English training colleges are better able to do so than the American Normal Schools themselves. (*a*) In the first place they have already full academic courses, the essential basis for the professionalized subject-matter. (*b*) In the second place there is no separation between the functions of instructing in methods and overseeing the actual teaching of the students—the critic teacher does not exist. These two features facilitate the adoption of practical methods and so go far toward counterbalancing the two obstructive factors—lack of equipment and size of class.

PROPOSED SCHEME FOR PREPARING HIGH SCHOOL TEACHERS IN A LIBERAL ARTS COLLEGE

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Under the current method of training high school teachers in California on the academic side, presumably in the subjects they are to teach, the student is at liberty to take almost any work offered in the college so long as he conforms to the college requirement of majors and minors. He may have one major and several minors, or several minors and no major. Majors and minors are defined in terms of units, and are not necessarily confined to subjects actually taught in the high school. In fact they may at times be Education, Psychology or Jurisprudence.

The certificate ordinarily issued being general in character, the determination of the applicant's actual ability to teach the subjects involved in the position for which he is applying is left to the appointing authority. The general high school certificate does not limit or define the high school subjects which the candidate is permitted to teach. While it is true that the certificate ordinarily contains a statement of the student's majors and minors as a notation for the guidance of the appointing officers, this statement in no way limits the privileges of these officers either in the matter of appointment or of actual assignment of subjects to be taught.

There has for some time been a growing dissatisfaction with this system for patent reasons, and among others the reason that in small schools teachers are occasionally appointed to teach subjects in which they have not had any training whatever. The colleges and universities in California empowered by the State Board to grant credentials which entitle the holder to the certificate are not limited in their demands of candidates to the minimum requirements of the regulations. These requirements may be and indeed, are regarded as minimum requirements, and the college has the privilege of setting up additional standards. Students who do not care to comply with these new standards have the privilege of pursuing courses in the college and on the basis of these requirements applying for certificates to the State authorities direct.

In an effort to improve its work in the training of high school teachers for service in the State, Mills College has reorganized its academic requirements in such a way as to cease as far as possible dealing in vague terms of majors and minors, and concentrate as far as possible on defined high school fields of instruction. The student's work is to be planned in terms of high school fields of instruction, for one of which she is to prepare, rather than in terms of the ordinary academic departments of the college. The principal object aimed at is to avoid the danger of mediocre training in a large field, and to equip prospective teachers in as scholarly a manner as possible for specialized work in the high school curriculum. This effort toward specialization appears to be in accord with the practice in progressive European countries where the secondary school teacher is ordinarily so well equipped that the ranks of the universities are customarily recruited from the secondary schools.

In adjusting the preparation of teachers to the actual state of affairs in the high school, it becomes apparent that in some cases the high school teaching position coincides with one established subject such as English, while in other cases the position comprises more than one subject, as for example, in a group of physical sciences. This is due in part to the nature of the subjects themselves, and in part to the operation of custom. It would probably be impractical to concentrate the attention of the student on one single subject such as Botany, because of the difficulty in placing such a student in service after the training has been given him. Inexperienced teachers begin their work in small high schools, where financial resources require combinations of studies, and this fact must be permitted to modify pure theory as to the best preparation.

Under the present reorganization, students are not advised to make any choice until the beginning of the junior year. At the beginning of that year, which in California means the first of the three final years to be devoted to professional preparation, the student is required to make an election of one of nine fields of high school instruction as follows: Art, English, History, and Social Sciences, Home Economics, Foreign Languages, Mathematics, Music, Natural Sciences, and Physical Education. In cases where the field and the subject coincide, as for example, English, Art, or Music, the requirements for the certificate are laid down exactly. In other fields, as for example, in Natural Sciences and Languages, the student is required to make a further specialization within the field. *The professional requirements in Education and Psychology are uniform for all fields.* Academic requirements leading to recommendation for the general certificate have been tentatively outlined for the various fields as follows:

(*A*) NON-ACADEMIC FIELDS

I, *Art;* II, *Home Economics;* III, *Music;* IV, *Physical Education.*

1. In each instance the student shall have done undergraduate work equivalent to the amount required of majors in the department.
2. Upper division and graduate courses in academic departments are required in each instance. The Art and Music departments specify fifteen units in such courses, the former department urging, but not prescribing that these units be taken in one modern language. The departments of Home Economics and Physical Education each require twelve units in upper division and graduate courses; the latter prescribing at least one course in Zoology.
3. From twelve to fifteen units of graduate work in the department are prescribed in each instance. The Physical Education Department prescribes in addition for the graduate year courses in Art, English, and Home Economics.

(*B*) ACADEMIC FIELDS

V. *English.*—Candidates shall, during the junior, senior, and graduate years, take 36 units in Upper Division English courses, including 6 units in Spoken English and 4 units in a graduate seminar.

VI. *History and Social Sciences.*—Subjects referred to below include History, Economics, Political Science and Sociology.

1. Candidates shall present 12 units of Lower Division work distributed as follows: History I, 6 units; Economics or Political Science, 6 units.
2. Candidates shall present 36 units in Upper Division courses during their junior, senior and graduate years, distributed as follows: fifteen units in History, including at least one graduate course throughout the year.
3. Eighteen Upper Division units distributed as follows:
   - (*a*) Twelve units in the second of the above subjects, and 6 units in History or a third of the above subjects, or
   - (*b*) Six units in each of three of the above subjects, one of which may be History, or a subject not included above.

VII. *Foreign Languages.*—(1) Candidates shall, during the junior, senior and graduate years take 15 units in one foreign language.

2. Candidates shall take 18 units in Upper Division courses distributed between two or three subjects, not less than 6 nor more than 12 in any one subject.

3. It is advised that 6 of these 18 units should be in History, and 6 in a second language.

4. At least 8 units in the language to be taught should be taken in the graduate year. This should include at least one graduate course throughout the year.

VIII. *Mathematics.*—(1) Candidates shall have completed in their junior, senior and graduate years 15 units in Upper Division courses in Mathematics.

2. Eighteen units to be distributed between two or three subjects, not less than 6 nor more than 12 in any one; 6 of these units may be in additional courses in Mathematics.

3. At least one graduate course throughout the year in Mathematics.

IX. *Natural Sciences.*—The subjects referred to below include Botany, Chemistry, Geology and Geography, Physics and Zoology.

1. Candidates shall have completed during the junior and senior years 15 units in Upper Division courses, in one of these sciences.

2. Candidates shall have completed in the junior, senior and graduate years 18 units in Upper Division courses distributed between two or three other subjects, not less than 6 units in any one and at least 6 units in one of the above sciences or mathematics; 6 of these 18 units may be in the science taken under provision 1.

3. At least one graduate course throughout the year in the same science as taken to satisfy requirements under section 1.

A STATEMENT CONCERNING THE EDUCATIONAL FINANCE INQUIRY CONDUCTED BY THE AMERICAN COUNCIL ON EDUCATION

The American Council on Education has appointed a commission to conduct a comprehensive investigation of educational finance in the United States. For several years legislators, philanthropists and the general public have been aware of the increasing difficulty of supporting public schools and universities. Educational officers have come to regard the problem of financing education as the outstanding problem now before them. The paramount importance of the matter was emphasized at the citizens' conference on education called by the United States Commissioner of Education in 1920. This conference passed resolutions urging a thorough investigation of the cost of education and of public resources available to support it. A group of the leaders of the Department of Superintendence of the National Education Association meeting in Atlantic City, February, 1921, likewise designated this problem as the most vital one now confronting school administrators and appointed a committee to assist in launching an investigation if means might be found to carry it on.

The American Council on Education then sought contributions for this purpose. It is now assured of funds sufficient to undertake such an investigation on a scale never before attempted. One hundred and seventy thousand dollars has been raised for the study. The Council has appointed a commission composed of recognized specialists in education, taxation and business to conduct the inquiry. The commission consists of the following persons:

Samuel P. Capen, Director of the American Council on Education, Washington, D. C., ex officio.

Ellwood P. Cubberley, Dean of the School of Education, Stanford University, Stanford University, California.

Edward C. Elliott, Chancellor of the University of Montana, Helena, Montana.

Thomas E. Finegan, State Superintendent of Public Instruction, Harrisburg, Pa.

Robert H. Haig, Associate Professor of Business Organization in Columbia University, New York City.

Victor Horawetz, Attorney-at-law, New York City.

Henry C. Morrison, formerly State Superintendent of Public

Instruction of New Hampshire, Professor of Education, University of Chicago, Ill.

George D. Strayer, Professor of Educational Administration and Director, Division of Field Studies, Institute of Educational Research, Teachers College, Columbia University, New York City.

Herbert S. Weet, Superintendent of City Schools, Rochester, N. Y.

Dr. Strayer has been selected as Chairman of the Commission and Director of the work of the Inquiry.

It is generally recognized that during the past decade all kinds of public schools have developed and expanded in an extraordinary manner. The war seemed to stimulate rather than to retard the growth of every grade of instruction given at public expense. What will it cost to support on a uniform basis a system of public education as at present organized? In what way can this undertaking, especially in the rural regions, be reconciled with the other obligations entailed by the conduct of the public's vital concerns? Educational workers and public-spirited citizens throughout the country have agreed that the issue has become one of cold, hard facts.

The primary aims of the Educational Finance Inquiry will be to study in typical states and committees the existing program of public education, the extent to which this program is carried out and the present and prospective costs involved. It is proposed to investigate the relation of educational expenditures to other necessary governmental expenditures, the methods of raising revenue for the support of education, and the possibility of effecting economies.

THE FORT WAYNE PLAN OF STUDENT TEACHING, OBSERVATION AND REPORTS

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The following detailed program for the organization of student observation, graded participation and practice teaching was organized by the writer and put into operation in the Fort Wayne Normal School in February, 1920. The results thus far have been on the whole so satisfactory that it has seemed worth while to present the plan to the public for suggestion and criticism.

GENERAL DIRECTIONS FOR STUDENT TEACHING

Weekly Program.—The teaching, observation, and reports of the students in the practice department will follow the weekly programs which will be handed to the training teacher. The students should copy these programs into their note books.

Assignments.—Each student will spend not more than one half of one semester in the same grade. Reassignment will be made at the end of the ninth and the twenty-seventh weeks.

Time.—During the first semester and the first ten weeks of the second semester each student will spend one hour a day in the grade to which she is assigned. During the last eight weeks of the second semester this period will be increased to one and one half hours a day.

Absences.—The student will be required to make up all work lost through absence.

Teaching.—All student teaching will be done on Monday, Tuesday, Wednesday, and Thursday. On Friday, the training teacher will teach while the student observes. During the first twenty-eight weeks of the course, the students will teach only those lessons indicated in the program. During the last eight weeks the student will have entire charge of the class-room and do all the teaching for one and one half hours, this time, if possible to consist of consecutive periods.

Observation.—Each week the student should be given the opportunity to observe all the activities or lessons asked for in the week's program. When observation lessons not asked for in the week's program are taught for the students, the training teacher should give specific directions concerning the points to which the student should give particular attention.

During the periods when the students are in the room, the training teacher should introduce many phrases of class-room teaching and management in order that the student through daily contact may become thoroughly familiar with such modern methods as the development of projects, socialized recitation work, supervised study, use of standard tests, etc. The training teacher may, from time to time, make such changes in her program as may seem desirable in order that the students may have the opportunity to come in contact with the various phases of school work.

Class-room Duties.—Those duties listed under "Student Participation in Class-room Duties" are those whose performing is based upon the "Readings and Observations" of previous weeks. Each week those which are starred should be emphasized. As soon as a student has become proficient in the performance of a duty she should be made responsible for it. If more than one student is in the room at one time, these responsibilities are to be divided between them.

Other Routine Duties.—In addition to the class-room duties based upon the readings, the student will have opportunity to learn and to have practice in the efficient performance of each of the following:

Checking of supplies.
Checking of library books.
Use of printing press.
Use of paper cutter.
Arranging of supply cupboards.
Making out requisition lists.
Preparing materials for day's use.
Writing assignments on boards.
Writing names in register.
Making out report cards.
Making out monthly and semester reports.
Testing of eyes and hearing.
Weighing and measuring of children.
Making out registration and medical inspection cards.

At the end of each month, each training teacher will be asked to hand to the Director of Practice a statement of the routine duties, as listed above, which she has taught the students under her care.

Reports.—The written reports should be based upon the questions and directions given in the weekly program under "Reading, Observation, and Report." The report of the preceding week should be handed to the training teacher for criticism and correction on Monday of each week. The Director of Practice will collect the reports on Wednesday morning, and after reading them will return them to the students. All these reports, together with the weekly programs upon which they are based, should be kept in a notebook devoted to this purpose.

Adjustments.—When, in the opinion of a training teacher, the work as outlined in a weekly program cannot be followed practicably, the matter should be referred to the Director of Practice in order that adjustments may be made.

First Semester

FIRST WEEK

Student Participation in Class-room Duties

During this week the student should be taught to perform a part of the routine duties listed in the "Directions for Student Practice."

Reading, Observation, and Report

The Seating of Children

What conditions should be considered in the seating of children in the class-room? Explain fully.

Readings:

Bagley: "Class-room Management," p. 82.
Dresslar: "School Hygiene," pp. 88–91, 247.
Terman: "Hygiene of the School Child," p. 242.
Parker: "Methods of Teaching in the Elementary Schools," pp. 71–72.
Shaw: "School Hygiene," p. 191.

SECOND WEEK

Student Participation in Class-room Duties

*Make a seat plat placing each child with reference to measurements, health, and characteristics as directed in the readings of last week. When a satisfactory plat has been completed, assist the training teacher in adjusting the seats and re-seating the children.

Reading, Observation, and Report

The Lighting of the School Room

What principles should be observed when regulating the light in a class-room?

Observe and state how the shades in the room to which you have been assigned should be adjusted from

9:00 to 12:00 on a bright day? on a cloudy day?

1:00 to 4:00 on a bright day? on a cloudy day?

What use should be made of the black-board space between the windows? Why?

Readings:

Monroe: "Cyclopedia of Education," Vol. IV, pp. 26–29.
Shaw: "School Hygiene," pp. 8–11, 14–22.

THIRD WEEK

Student Participation in Class-room Duties

Adjust window shades as occasion demands while in the room.

Reading, Observation, and Report

Ventilation and Temperature

What is the temperature and what are the air conditions which should be maintained in a school room?

How can these conditions be secured when there is no automatic system of ventilation in operation?

Readings:

Ritchie: "Primer of Sanitation and Physiology," pp. 272–280.

Dressler: "School Hygiene," pp. 140–149.

FOURTH WEEK

Student Participation in Class-room Duties

*Regulate the ventilation and temperature while in the room.

*Adjust window shades as occasion demands.

Reading, Observation, and Report

Care of School Room Equipment.

What is the educational value of neat and conveniently arranged, well-kept school room equipment?

List ten suggestions found in the following readings concerning the care of school room equipment and state why each is desirable.

Readings:

Burrage and Bailey: "School Sanitation and Decoration," p. 93.

Bagley: "Class-room Management," pp. 41–45.

Betts: "Class-room Methods and Management," pp. 360–361.

Shaw: "School Hygiene," pp. 19–182, 29.

Parker: "Methods of Teaching in the Elementary Schools," p. 70.

Maxwell: "Observation of Teaching," p. 104.

FIFTH WEEK

Student Participation in Class-room Duties

*Keep in place and in order the working equipment of the room.

*Regulate the ventilation and temperature.

Reading, Observation, and Report

School Room Decoration

What should be the teacher's aim in the introduction of any kind of decoration into the school room?

*Adjust the window shades.

List the articles in your room which are there for the purpose of decoration and state whether each is suitable and suitably placed.

If you had charge of this room, what would you do to make it more attractive and convenient? (Do not make suggestions which would involve the spending of a large sum of money.)

Readings:

Shaw: "School Hygiene," pp. 22–24.

School Arts Magazine, Vol. XIII, pp. 97–101, 114–115.

Burrage and Bailey: "School Sanitation and Decoration," pp. 92–93, 83, 100–101, 119–121, 122–126.

SIXTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Make such changes in the arrangement and decoration of the room as were decided upon last week.

*Keep in place and in order the working equipment of the room.

*Regulate the ventilation and temperature.

Adjust the window shades as occasion demands.

READING, OBSERVATION, AND REPORT

Freedom *vs.* License in the School Room

What do you consider to be the difference between *freedom* and *license* as applied to children's conduct in the school room?

Describe five examples of legitimate freedom which you have observed in your room this week. Five examples of license. Give a reason for your classification of each.

Readings:

Parker: "Methods of Teaching in the Elementary School," pp. 56–62.

Colgrove: "The Teacher and the School," pp. 376–377.

Kindergarten and First Grade Magazine, April, 1920, pp. 150–151.

Teacher's College Record, March, 1919, pp. 99–111.

Kindergarten and First Grade Magazine, Vol. III, pp. 133–139.

SEVENTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Take charge of children who are in

READING, OBSERVATION, AND REPORT

Freedom *vs.* License (*Continued*)

the room before the morning session begins.

*Keep in place and in order the working equipment of the room.

Regulate the ventilation and the temperature.

Adjust the window shades.

What is to be gained by permitting children to regulate their own actions as long as such regulation does not interfere with the advancement and well being of themselves and their group?

What rules governing the routine of the room are enforced in your room? How and by whom were these rules made? Criticize each from the standpoint of the principle stated above.

Readings:

Miller: "Education for the Needs of Life," pp. 241–242, 205–206.

Dewey: "Democracy and Education," pp. 352–357.

EIGHTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Take charge of children who are in the room before the morning session begins.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and temperature.

Adjust window shades.

READING, OBSERVATION, AND REPORT

Corrective and Preventive Discipline

What is the difference between class room management by means of *preventive* measures and class-room management by means of *corrective* measures? Which do you consider to be the better? Why?

Give five examples of preventive measures observed this week. Five examples of corrective measures. Which of the latter might have been unnecessary had preventive measures been taken?

From the readings below, make a list of fifteen preventive measures which any teacher can take in order that she may lessen the number of corrective measures necessary for the maintenance of good order.

Readings:

Parker: "Methods of Teaching in the Elementary Schools," pp. 67, 74–82.

Gesell: "The Normal Child and Primary Education," Chap. 21.

Judd: "Introduction to the Scientific Study of Education," pp. 243–250.

Elementary School Journal, January, 1921, pp. 367–374.

Bagley: "School Discipline," pp. 74–88.

NINTH WEEK

Student Participation in Class-room Duties

*Take entire charge of the classes when they are passing to and from the room.

*Take charge of the children who are in the room before the morning session begins.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and temperature

.Adjust the window shades.

Reading Observation, and Report

Opening Exercises

What is the purpose of the opening exercise period?

From your reading make a list of five types of opening exercises which you consider good. Give a reason for your choice.

From the suggestions given for general assembly periods, select three which could be adapted to school room use and explain how you would so adapt them.

Outline a plan by which the children may share the responsibility of planning interesting and profitable morning exercises.

Readings:

Elementary School Tteacher, Vol. vi, pp. 280–297.

Freeland: "Modern Elementary School Practice," pp. 136, 375–387.

Wilson: "Motivation of School Work," pp. 224–229.

TENTH WEEK

Student Participation in Class-room Duties

*Put into operation the plan for the morning exercises which was organized last week.

*Take charge of the classes passing to and from the room.

Take charge of the children in the room before the morning session begins.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and temperature.

Adjust window shades.

Reading, Observation, and Report

The Aims of Teacher and Pupil

What is meant by the teacher's aim? the pupils' aim? Wherein do they differ? Give examples.

What was the teacher's aim and what was the pupils' aim in each of three lessons observed this week?

Readings:

Earhart: "Types of Teaching," pp. 222–227.

McMurry: "Method of the Recitation." pp 107–112.

(For examples of "aims," see Strayer's "Brief Course in the Teaching Process," pp. 175–214.)

ELEVENTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Supervise the morning exercise programs.

*Take charge of classes passing to and from rooms.

Take charge of children before the morning session begins.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and the temperature.

Adjust the window shades.

READING, OBSERVATION, AND REPORT

Summaries

What is the purpose of a summary? Who should summarize each lesson? What are the characteristics of a good summary?

Outline three good summaries which you have heard given this week. Why did you consider them "good?" Did each of the three show that both the teacher's and the pupils' aim had been accomplished? Explain.

Readings:

McMurry: "Method of the Recitation," pp. 152–155.

Charters: "Methods of Teaching," pp. 196–204.

Earhart: "Types of Teaching," pp. 229–230.

Strayer: "Brief Course in the Teaching Process," p. 171.

Plan the summaries for three lessons which the training teacher will teach next week. In each case plan a type of summary which will clearly show whether or not the aims of teacher and pupil have been accomplished.

TWELFTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the summaries of three lessons taught by the training teacher, following the plans made last week.

*Supervise the morning exercise periods.

Take charge of classes passing to and from the room.

Take charge of the children before the morning session begins.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and temperature.

READING, OBSERVATION, AND REPORT.

Motivation

What is meant by a motivated lesson? Why should all lessons be motivated?

What is the difference between a pupil's *motive* and a pupil's *incentives* Which will produce the best work on the part of the children?

Describe the lessons observed this week in which good work on the part of the children was encouraged through the development of a motive; of an

Adjust window shades.

incentive.

Did you see any lesson in which either might have been furnished and was not? Explain.

Readings:

Klapper: "Principles of Educational Practice," pp. 224–229.

Wilson: "Motivation of School Work," pp. 15–27, 47–53.

Freeland: "Modern Elementary School Practice," pp. 75–96.

Make a list of five activities in which the various groups of children might happily and profitably engage during the period before the morning session begins, and, in the case of each, state what motive you could develop which would interest the children in these activities.

Plan three summaries to be taught next week.

THIRTEENTH WEEK

Student Participation in Class-room Duties

*Teach the summaries planned last week.

*During the period before the morning session begins, interest the children in the motivated activities planned last week.

Supervise the morning exercise periods.

Take charge of classes passing to and from the room.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and temperature.

Adjust the window shades.

Reading, Observation, and Report

McMurry's Standards

Read and summarize in two or three sentences, each section of Chapter 2, McMurry's "Elementary School Standards."

Tell exactly how each of the standards outlined by McMurry was met in each of three lessons observed this week. Discuss each lesson separately.

Readings:

McMurry: "Elementary School Standards," pp. 5–12, 23–44.

Plan three summaries to be taught next week.

Plan one more activity in which to interest the children before the session begin. In making this plan try to provide for the four McMurry standards.

FOURTEENTH WEEK

Student Participation in Class-room Duties.

*Teach the summaries planned last week.

Reading, Observation, and Report

Assignments

What are the characteristics of a

*Before the morning session begins, interest the children in the motivated activities which have been planned.

Supervise the morning exercise programs.

Take charge of classes passing to and from the room.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and the temperature.

Adjust the window shades.

good assignment?

What considerations should determine the subject matter to be assigned?

Outline three good assignments which you have heard made this week. Explain why you consider them good.

Suggest how any assignment which you heard might have been improved.

Readings:

Earhart: "Types of Teaching," pp. 80–91.

Klapper: "Principles of Educational Practice," pp. 367–368.

Strayer: "Brief Course in the Teaching Process," p. 172.

Freeland: "Modern Elementary School Practice," pp. 16–22.

After consultation with the training teacher in regard to subject matter, plan three assignments to be taught next week. In planning these assignments make provision whereby the McMurry standards may be met in the lessons based upon them.

FIFTEENTH WEEK

Student Participation in Class-room Duties

*Make the assignments planned last week.

*During the period before the morning session begins, interest the children in the motivated activities which have been planned.

Supervise the morning exercise periods.

Take charge of classes passing to and from the room.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and the temperature.

Adjust the window shades.

Reading, Observation, and Report

Assignments (*Continued*)

When should assignments be made? Why?

Can a teacher always make the assignment she has planned? Explain your answer.

Outline three good assignments heard this week.

Suggest how any assignment which you heard might have been improved.

Readings:

McMurry: "Method of the Recitation," p. 181.

Maxwell: "Observation of Teaching," pp. 61–62.

Bagley: "Educative Process," pp. 317–319.

Charters: "Teaching the Common Branches," pp. 341–343.

Review readings listed under Fourteenth Week.

Plan three summaries with the appropriate assignment following each, these summaries and assignments to be taught in connection with lessons which the training teacher will teach next week. In planning these assignments make provision for meeting the McMurry standards in the study and recitation periods dependent upon them.

SIXTEENTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the summaries and, *if practicable*, make the assignments planned last week.

Take charge of the children before the morning session begins.

Supervise the morning exercise periods.

Take charge of the classes passing to and from the room.

Keep in place and in order the working equipment of the room.

Regulate the ventilation and temperature.

Adjust the shades.

READING, OBSERVATION, AND REPORT

Seat Work

What can a teacher do with regard to seat work in order that it may be profitable rather than merely time consuming? Be specific.

What relation should the seat work have to the material covered during the recitation periods?

Describe three seat work periods observed this week which have been profitably spent by the children. Explain why you consider them profitable.

From the readings, select five types of seat or study-period work which you think would be practical for use in the room to which you have been assigned. Give a reason for your choice of each.

Readings:

Grades I–III

Gesell: "Normal Child and Primary Education," Chap. 18.

Dobbs: "Primary Handwork," Chap. 1.

Twentieth Year Book, Part II, pp. 154–172.

Primary Education, Vol. XXVII, pp. 350–351, 437–441, 494–498, 508, 566, 568–569, 584–586, 633–637.

Current numbers of *Primary Education*.

Grades IV–VI

Twentieth Year Book, Part II pp. 154–172.

Dobbs: "Illustrative Handwork," Chap. 1.

Strayer: "Brief Course in the Teaching Process," pp. 87–99.

Norsworthy and Whitley: "Psychology of Childhood," pp. 103–104.

Bagley: "Educative Process," pp. 319–322.

SEVENTEENTH WEEK

Student Participation in Class-room Duties

*Give the necessary assignment or directions and supervise the work which the training teacher desires the children to do during while at their seats in study periods. At the end of each period, summarize the work by giving each child a few seconds in which to state at least one thing which he has learned or learned to do during the period.

Continue to be responsible for all of the duties listed in the outline for the sixteenth week.

Reading, Observation, and Report

Seat Work (*Continued*)

Outline the work of five good seat work periods observed this week.

Plan the work with the necessary assignment or direction for five seat work or study periods for next week. (Consult the training teacher concerning the class work which the children will be doing at that time.)

Readings:

Refer to the books given in the readings of last week for examples of definite plans.

EIGHTEENTH WEEK

Student Participation in Class-room Duties

*Assign, supervise and summarize the seat work planned last week.

Continue to be responsible for the duties listed in the program for the sixteenth week.

Reading, Observation, and Report

Program Making

What considerations should govern the making of a daily program? Explain in detail.

Readings:

Bagley: "Classroom Management," pp. 56–64.

Norsworthy and Whitley: "Psychology of Childhood," pp. 103–104.

Strayer: "Brief Course in the Teaching Process," pp. 161–162.

Shaw: "School Hygiene," pp. 229–234.

After consulting the training teacher with regard to fixed periods, make a tentative program for the second semester's work. Justify your arrangement of periods.

SECOND SEMESTER

NINETEENTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Make a seat plat, properly placing the group which will be in the room during the next semester. Follow the procedure learned at the beginning of last semester.

Continue to be responsible for the duties listed in the program for the sixteenth week.

READING, OBSERVATION, AND REPORT

The Drill Lesson

What is the purpose of a drill lesson?

What type of material should be drilled upon?

What are the characteristics of a good drill lesson?

Outline the steps of a drill lesson as described by Strayer, and make a brief statement of what should be included under each.

Outline by steps three good drill lessons which you have observed this week. In each case indicate the teacher's aim, the pupils' aim, and the pupils' motive. Why did you consider these lessons "good"?

Readings:

Strayer: "Brief Course in the Teaching Process," pp. 41–50.

Parker: "Methods of Teaching in the Elementary Schools," pp. 255–267.

Plan the seat work for two periods of next week. This work should be of the drill type.

TWENTIETH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Assign, supervise and summarize the seat work planned last week.

Continue to be responsible for the duties outlined in the program for the sixteenth week.

READING, OBSERVATION, AND REPORT

The Topical Recitation Lesson

What is the purpose of the topical recitation?

What type of material should be presented in a topical recitation?

Of what use is a notebook in the preparation of a topical recitation?

What are the characteristics of a good topical recitation?

Outline three good topical recitations heard this week. Indicate what material other than that found in the text book was presented by the children in each lesson. Use this outline form:

Teacher's aim.
Pupil's aim.
Pupils' motive or incentive.
Preparation.
Body of Lesson.
Summary.

Did these recitations conform to the McMurry standards? Explain.

Plan three drill lessons to be taught next week. (When planning drill lessons, always use the form for a drill lesson as given by Strayer: "Brief Course in the Teaching Process," pp. 41–50.) Plan the assignment to follow each.

At the beginning of every lesson plan, state the teacher's aim, the children's aim, and the children's motive or incentive. At the close of every lesson plan, outline your plan of assignment to follow.

TWENTY-FIRST WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the lessons and assignments planned last week.

Continue to be responsible for the duties outlined in the program for the sixteenth week.

READING, OBSERVATION, AND REPORT

Use of Illustrative Material

What principles govern the effective use of pictures, models, relics, and other illustrative materials?

Give three examples of the effective use of illustrative materials which you have observed this week.

Readings:

Bagley: "Educative Process," pp. 246, 278–280.
Earhart: "Types of Teaching," pp. 315–317.
Norsworthy and Whitley: "Psychology of Childhood," pp. 112–129.

Plan three topical recitation lessons, using the form as outlined in the twentieth week's program, these lessons to be taught next week. Provide for the use of some illustrative material in each lesson. Also provide for meeting the McMurry standards.

TWENTY-SECOND WEEK

Student Participation in Class-room Duties

*Teach the lessons and assignments planned last week.

Continue to be responsible for the duties listed in the program for the sixteenth week.

Reading, Observation, and Report

Dramatization

What aims can be accomplished through dramatization?

Which is the more valuable—a dramatization of material which has been read orally and discussed in class, or a dramatization based upon the silent reading or study without discussion of the same material? Explain your answer.

Describe three worth while dramatizations which you have seen this week. Why "worth while"?

Readings:

McMurry: "Method of the Recitation," pp. 168–174.

Freeland: "Modern Elementary School Practice," pp. 140–173.

Norsworthy and Whitley: "Psychology of Childhood," pp. 104–106.

Plan one drill lesson and two topical recitation lessons to be taught next week. Keep the McMurry standards in mind when planning these lessons.

Plan the seat work for two periods for next week.

TWENTY-THIRD WEEK

Student Participation in Class-room Duties

*Direct, supervise and summarize the seat work planned last week.

*Teach the lessons planned last week.

Continue to be responsible for the duties outlined in the program for the sixteenth week.

Reading, Observation, and Report

Questions and the Technique of Questioning

What is the purpose of the fact question? Of the thought question?

Explain by means of examples the difference between a thought question and a fact question.

Give examples of the suggestive and the alternative question. Why should they be avoided?

Make a list of ten fact questions which you have heard the training teacher give this week; of ten thought questions. After each fact question write a thought question which might have been used, the answer to which would have required a knowledge of the same fact as that asked for, but in an applied form. Several fact questions may be grouped under one thought question if desirable.

List any suggestive or alternative questions which you heard asked this week. State the circumstances under which they were asked.

Readings:

Maxwell: "Observation of Teaching," pp. 94–97.

Strayer: "Brief Course in the Teaching Process," pp. 115–128.

Johnson: "Teaching of History," pp. 314–317.

McMurry: "Method of the Recitation," p. 163.

Plan one dramatisation lesson.

Plane one drill lesson based upon fact questions.

Plan one topical recitation in which illustrative material can be used.

Plan one topical recitation in which the topics to be reported upon will be based upon assigned thought questions.

TWENTY-FOURTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the lessons planned last week.

Continue to be responsible for the duties listed in the program for the sixteenth week.

READING, OBSERVATION, AND REPORT

The Recitation Lesson
(Question and Answer Type)

What is the value of the question-and-answer recitation lesson?

What type of material should be developed by this type of lesson?

Pick out the pivotal questions in three lessons of this type heard this week and state whether each is a thought or a fact question.

Readings:

Earhart: "Types of Teaching," pp. 99–101.

Bagley: "Educative Process," pp. 323–325.

Betts: "Class-room Method and Management," pp. 120–121.

McMurry: "Method of the Recitation," pp. 146–155.

Plan two recitation lessons of the question and answer type, all pivotal questions to be thought questions.

Plan two drill lessons. Include the assignment with each of these plans.

TWENTY-FIFTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the lessons planned last week.

*Learn the fire drill regulations and take charge of the children during fire drills.

Continue to be responsible for the duties listed in the program for the sixteenth week.

READING, OBSERVATION, AND REPORT

The Inductive Lesson

What is the purpose of the inductive lesson?

What type of material should be taught inductively?

In short concise statements, summarize the purpose of each of the five steps in an inductive lesson.

List five units of subject matter in geography, history, arithmetic, and language, which could be effectively taught inductively.

Outline by steps, as explained by Earhart and Strayer, three inductive lessons which you have heard this week.

Readings:

Strayer: "Brief Course in the Teaching Process," pp. 57–63.

Earhart: "Types of Teaching," Chap. 5.

Plan one topical recitation lesson in which illustrative material can be used, and one dramatization lesson.

Plan one inductive lesson. Organize this type of lesson by the steps as outlined above.

TWENTY-SIXTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the lessons planned last week.

*Take charge of the children during fire drills.

Continue to be responsible for the duties listed in the program for the sixteenth week.

READING, OBSERVATION, AND REPORT

The Deductive Lesson

What is the purpose of the deductive lesson?

Why is it often desirable to follow an inductive lesson with a deductive lesson?

Outline the steps of a deductive lesson and state the purpose of each.

Outline by steps, three deductive lessons taught by the training teacher this week.

Readings:

Strayer: "Brief Course in the Teaching Process," Chap. 6.

Earhart: "Types of Teaching," Chap. 6.

Plan one deductive lesson. Always organize this type of lesson by the steps outlined above.

Plan two inductive lessons and one drill lesson.

At the end of each of these lessons, state how you expect to meet the McMurry standards when teaching it.

TWENTY-SEVENTH WEEK

Student Participation in Class-room Duties

*Teach the lessons planned last week.

Continue to be responsible for the duties listed in the program for the sixteenth week, and to take charge of children during fire drill.

Reading, Observation, and Report

The Supervised Study Lesson

What is the purpose of the study lesson?

Under what circumstances should a study lesson take the place of the usal form of recitation?

What are some of the aims which the teacher should hope to accomplish by means of the study lesson? Be specific.

Outline in detail the method used in two study lessons observed this week. What was accomplished by these lessons?

Readings:

Strayer: "Brief Course in the Teaching Process," pp. 87–99.

Earhart: "Types of Teaching," Chap. 14.

Plan two deductive lessons, one study lesson, and one inductive lesson for next week.

(*To be continued*)

LONG-DISTANCE SUPERVISION: AN OPEN LETTER TO COUNTY SUPERINTENDENTS AND SUPERVISORS

Dear Friends:

"How can I help my teachers do better classroom work?" This is the question which all of you are asking. The answer must be general. Helping a teacher is an individual problem. No two teachers will need the same help, and no two supervisors can help in the same way. Many preachers have weakened their influence by trying to preach like Sam Jones. The same is true with teachers and supervisors who try to work just like some one else. The effective supervisor will get ideas from every source possible, but he will use them in his own individual way.

One can judge the quality of an entire bowl of soup as soon as the first spoonful is taken. Judging school work is different. It is often necessary to observe all day before safe conclusions can be reached. Recitations may be given which show that the pupils are familiar with text book facts, but this is not enough to enable one to judge of the teacher's real worth. You should look for more important signs, such as ideals, good thinking, manners, habits, self-control, etc.

Supervisors may often do well to postpone conclusions until the teacher's work throughout the entire community is observed. No true supervisor will jump to conclusions and immediately ask the teacher to change her ways. Any teacher should be given an opportunity to explain why she is doing what she is doing. The worthy supervisor will listen with an open mind. If a teacher dreads to see the supervisor coming, the latter is usually at fault.

A good supervisor, in visiting a school, will do four things:

1. With an unprejudiced mind, and with an attitude of brotherly helpfulness, see what takes place.
2. Diagnose what takes place.
3. Pick out strong and weak points, and formulate suggestions for improvement before having a conference with the teacher.
4. Have a private conference in which the utmost liberty, freedom, and ease is felt by the teacher.

Recently, with a number of visitors, I observed a class for the full period of forty minutes, and the following report is made to illustrate the four points named above.

I. *A Description of What Happened.*—The visitors sat down where they could both see and hear. They remained quiet during the entire period.

The class was composed of about 20 eighth grade pupils. These were organized into a club called The Civics League. The first fifteen minutes of the recitation were taken up in "preliminaries," such as the secretary's report, the business manager's report, selecting an appropriate cartoon, a civic saying or poem to be put on the board, etc.

The lesson was one in civics. The topic, "An ideal form of government," had been assigned the day before. Each pupil was to come prepared to describe and defend his or her ideal form of government, but since the time for the recitation was short, not many forms were reported, and they, in a superficial way. The teacher and some of the pupils questioned the plans submitted. The authors of the plans defended them. The same lesson was assigned for the next day.

The teacher spent possibly one-fourth of the time explaining to the visitors what he was trying to do.

II. *A Diagnosis of the Recitation.*—The time for the recitation was only twenty-five minutes. This possibly explains why the teacher passed so rapidly from one point to another. It may also explain the fact that of those few who reported, no one made a report full enough to let a visitor know whether the pupils comprehended the proposed plan or not. The reports merely stated the form of government and the kind of ruler. Three of the pupils reported that they wanted a government like a certain other nation's, naming the nation. The plans or forms of government were not discussed so much as such questions as whether a president should be elected for a term of four years or six years.

Important and as timely as this topic is, to some people, it did not appeal to a large portion of this class as worth while. They showed very little interest. The teacher believes in his pupils, he loves his subject and is a master of it. He has confidence in himself. His purpose, "To teach civics in such a way that it will go over into the right kind of activity," is the highest aim a teacher could have. As one sees 75 per cent of his pupils taking no part in the discussions, the question naturally arises, "How will this lesson get over into the active lives of these pupils?" It is neither talk nor silence that determines what help pupils get from a recitation, but the quantity and quality of thinking they do. In this instance the majority of the class showed no signs of interest or of thinking. The teacher was so full of his subject that he apparently did not realize that so many of his pupils had no real problem before them. The teacher also spent so much of his time explaining to the visitors what his aims were that the recitation was not a normal recitation for him or his pupils. His strong personality, his love for and knowledge of the subject, and his position before the class, made him the center of attraction. He did so much of the talking that he had to do most of the thinking. This is training the pupils away from initiative and leadership. It is causing them to be dependent and passive, instead of independent and active.

III. *Suggestions for Improvement.*—(1) There should be more attention given to the assigning of only those lessons that grow directly from the experiences and interests of the pupils, thereby making it possible for them to have real living problems.

2. To make the pupils take the initiative, and depend less on the teacher I suggest that the teacher take the place in this class that he says he has in another: "merely one of the pupils."

3. A recitation should not close without some vital ideas or principles being clinched by the pupils. Apparently the pupils got very little from this recitation.

4. Problems of the home, school, city, county, and the state, are so numerous and so vital, and so close to the lives of the pupils that one questions the advisability of having eighth grade pupils try to study questions that are baffling to our greatest statesmen.

5. This topic could have been stated in such a way as to approach more nearly that of a project for each member of the class; *e.g.*, "Our Civic League is now a people without a government. Is it necessary that we have one? What kind of government will be best for us?"

6. Even if a class is ready to take up such a problem as the making of an ideal form of government, it is not best to pass so quickly from one plan to another. One plan well examined will help pupils more than five briefly stated.

7. A teacher can make the work more profitable for all concerned by ignoring visitors.

8. A teacher is seldom, if ever, justified in having pupils take a lesson over. There should be new material added. The old could possibly be studied from a new angle.

IV. *Conference with the teacher*, based on the following questions, and others that might necessarily arise.

1. What advantage do you find in organizing your class into a Civic League?

2. What topics have these pupils been most interested in this term? Why?

3. What topics have they been least concerned about? How account for it?

4. You asked your pupils how that lesson would help them. What answers were you hoping to get?

5. What per cent of the class should take part in the discussions? Account for the fact that so many of the pupils did not appear interested.

6. In a recitation, such as this one, what per cent of the talking should be done by the teacher? What is the teacher's duty during a recitation?

7. (*a*) What was the biggest thing you did for your pupils during this recitation? (*b*) What was your aim in this recitation? Did you accomplish it? (*c*) What was the pupils' aim?

8. No one can have a greater aim than the one which you have set up, namely, "To teach civics so as to affect in the best way the lives of the boys and girls." How is the course in civics doing this?

9. I once had a civics class similar to yours. We studied the forms and uses of governments by trying to answer the following questions:

(*a*) What caused the early New England settlers to organize?

(*b*) How are the people working together for each other's good (*a*) in this community? (*b*) In this county? (*c*) In this state? (*d*) In this nation?

(*c*) Why not let this "working together for each other's good" be a voluntary matter?

(*d*) What is the function of a government?

(*e*) How does our government insure liberty to each individual?

(*f*) Name the ways in which the government is helping you.

(*g*) Name the ways in which you are helping the government to function.

(*h*) Name a form of government that is different from ours. Which do you like better? Why?

My pupils were interested in these questions. You are studying similar problems and I was wondering how this method of attack would work with your pupils.

10. When analyzed, successful practice discloses sound reasons for the following criteria of the recitation.

(*a*) Pupils are intensely interested.

(*b*) They see and feel a real need for what they are doing.

(*c*) Their ideas are fairly clear and their thoughts are organized.

(*d*) Pupils ask questions and take the lead in some of the discussions.

(*e*) Pupils are lifted to a higher moral plane of thinking and acting.

Measured by these standards, how would you rate your recitation?

11. What was your purpose in assigning the same lesson again?

12. Since you have the same lesson for tomorrow, what changes, if any, will you make in the way you handled it to-day?

So much for the report. In conclusion, let me say that I am on trial. You are on trial. The teacher is on trial. The pupil is on trial. We are all working together for the common good. We all make mistakes and should be patient one with another. Before criticising adversely, find out the teacher's reason for doing what she does. If you are open minded you may be converted to her methods. It does not pay to be dogmatic in supervision. The questions suggested above are for the purpose of getting the teacher's viewpoint. This is necessary before effective supervision can be given. Such questions will help the teacher have a reason for doing what she does. Where you have a teacher who can think, it is better to raise vital questions than to settle them, but your teachers and directors want suggestions from you and they will be disappointed if they do not get them.

I should be glad for you to write me about one or more of your observations, emphasizing the four points brought out in this letter.

Sincerely your friend,
Signed—J. R. Grant,
State Agent Rural Schools,
Little Rock, Arkansas.

Periodic Variations in Efficiency

As shown in mental and physical tests together with some weather effects.

BY

ARCHIBALD G. PEAKS

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EDUCATIONAL ADMINISTRATION AND SUPERVISION

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IOWA SCHOOL TAXATION

E. E. LINDSAY

The State University of Iowa

During the past two years Iowa school districts have been sorely pressed for funds. Perhaps during no former period have the school boards and Superintendents generally of Iowa had such a task to keep the doors of the public schools open. In some cases this task has proven hopeless and the schools have been dismissed "for lack of funds." In others various expedients have succeeded in preventing such a step. In practically all districts some creditors have been forced to receive warrants marked not payable "for want of funds." In some cases even the teachers have been forced to choose between accepting such warrants or stop teaching. Of course such warrants are good and draw six per cent interest but they do not pay board bills, room rent, or buy clothes. County treasurers all over the state have been cooperating in the effort to alleviate the situation by advancing taxes not yet due. And in many districts the schools have been kept open only by the civic spirit of the bankers of the town, who have, in spite of the extreme financial stringency, combined to produce enough money to take care of the immediate and absolute necessities.

That the picture painted in the preceding paragraph is not too black or drawn from fancy the following figures are presented. They are the result of a sampling survey made in the early months of this year. Of the Iowa towns having a population of 5000 and more twenty were selected at random. Of these twenty, seventeen were on January 1st of this year running on borrowed money. The next payment of taxes which would, to any appreciable extent, ameliorate such a condition, was due the 15th of April. These two statements mean that perhaps 85 per cent of Iowa town school districts ran for the first quarter of this year on borrowed money. There is no reason to suspect that the country and consolidated school districts were in better condition. In fact other data tend to show that the condition of the consolidated districts was worse, since their debt service is, as a class, higher than that of the town schools. On April first, 15 days before relief could be expected, the total deficit of the twenty cities above referred to amounted to $1,500,000 or $85,000 per town. This figure while not relatively large represents for towns of this size 25 per cent of their total average budget. In some cases the percentage ran as high as fifty.

The conditions brought out by these figures are at the beginning of this school year not so acutely distressing. Taxes levied last year when the increases in costs were beginning to be felt have begun to come into the districts. But the situation is by no means normal as yet, notwithstanding the passage by the state legislature of acts which greatly increase the taxing power of school authorities. Nor will it be normal for some time.

Not only were Iowa school finances during the early part of this year in the condition described but then as always the schools were the biggest factor in the municipal life of any community. This statement may be considered from many angles but it is particularly true from the financial standpoint. No other factor in municipal activity, receives the share of municipal expenditures that the schools do. Not only this but *the expenditure for all other factors combined does not equal that for public schools.* These statements are substantiated by data on 634 Iowa cities and towns which show that these cities spend from 59 to 66 per cent of their total income on public schools. (In general the smaller the town the larger the proportion going to schools, a fact easily explainable by the decrease in other municipal activities.)

In view of the critical financial condition which was demanding the attention of school men over the state and in view of the importance to the public at large of the factor of civic life at stake, an investigation was begun which had for its purpose the discovery of the facts underlying the situation. It is the purpose of the author to present in this article the partial findings of this survey in so far as they have to do with sources of school taxation.

The school districts of Iowa depend for their support upon the taxation of the property lying within their districts. There are some sources of outside support[1] but the proportion of the total that they contribute is very minor. This study confines itself to the sources within the district. Money from these sources all comes by way of taxation. The property in Iowa subject to taxation is divided into three classes: 1. Moneys and credits, 2. Real property, 3. Personal property. The tax rate upon the first class is uniform throughout the state and this rate is based upon a uniform assessment value, namely that of the face value of the instruments. This reduces the possibilities of variations in this source of school revenue to the degree to which the assessors are able to secure the true amounts of such property from the individual assessed. That there are wide variations in the percentages of their true moneys and credits that different individuals turn in is without doubt true. An investigation into this variation is not here intended. There are two factors which would make such an investigation of minor importance for school purposes. *First*, moneys and credits are not, in most counties, considered in levying taxes for any purpose. The income from the five mill state fixed tax on moneys and credits is used to make the deficit caused by those taxes on real and personal property which cannot for any reason be collected. There are a few counties where the moneys and credits valuation is treated so as to correspond to the valuations for the other two classes and the tax rate based on the total. This practice is not general. *Second*, moneys and credits do not constitute a large percentage of Iowa property. For these and other reasons no further discussion will be given of this class.

---

[1] All districts receive from the state permanent school fund what amounts to about $3.00 per pupil per year. Some districts receive state aid from other sources. This in most cases amounting to less than $1000. A very few of the

Classes two and three, namely real and personal property, are for the purposes of taxation in Iowa thrown together and treated as one.[1] It is upon the real and personal properties that the school levies of Iowa are made. The taxable value is uniformly over the state one-fourth of the assessed value. The two factors which are left very largely to local control are:

1. Assessment of properties.
2. Levying of millages.

The first of these is the fundamental factor and the one with which we are here concerned. The other is also a source of wide variation. It is separately treated elsewhere.

---

larger districts receive Federal aid. The percentage of the money coming into Iowa school districts from such or other outside sources is at present practically negligible.

[1] These two classes are assessed at different intervals. Real every two years, personal every year.

The assessed value of Iowa real and personal property is by state law, its true value being specified as that value which the property would bring in the ordinary course of trade. The U. S. census of 1910 states that Iowa city and town property is taxed at 15 per cent of its true or market value. This with taxable value uniformly fixed at one-fourth of the assessed value would make the rates of assessment 60 per cent. It shall be the purpose of this article to present data which shall provide answers, partial at least, to the following four questions.

1. *What is the true index of assessment of Iowa city and town property?*
2. *Do properties of various sizes bear any equitable share of the tax burden?*
3. *Do properties of the same size bear equal shares of the tax burden?*
4. *Does the size of the city influence the distribution of the tax burden?*

These questions strike directly at the base of all school finance in Iowa cities. They deal with the fundamental factor, that upon which the support of the Iowa city and towns school systems rest, namely the valuation of the property which is taxed for their support. It is obvious that in an ideal situation all properties would be taxed either upon their just market worth or upon some uniform percentage of that worth. This principle of taxation is recognized in Iowa by the taxation of moneys and credits as heretofore described. The law of Iowa also recognized the same principle in the taxation of the other classes, real and personal. It shall be the purpose therefore of the author to present material to show to what extent the practice in Iowa, 1921, corresponds with the principle as stated and recognized. For the purposes of clarity the material has been organized under headings stated in the above four questions.

For the answer of these questions certain items of information are necessary. These are in the main two. What is the real worth of the property? Second, what is the value which the assessor has put upon it? That the findings shall coordinate with the state law and because of the fact that the real value obviously is that value which the property would bring in the ordinary course of trade the figure chosen to represent the true value of property is that amount which the property has actually brought in the ordinary course of trade. That this figure will be directly and obviously comparable to the assessed valuation of the property, this transaction the terms of which are used, must have taken place within the period for which the assessed valuation holds. That is on the properties used in this study two terms are used. First, selling price; second, assessed value upon which the taxes for the period when sold have been based.

The relationship of these two terms would give the actual and true rate of assessment for that property. Given therefore enough specific instances of this kind, widely enough scattered over the state and the assessment situation in Iowa cities could be rather accurately determined.

It is obvious that in dealing with such a situation the prices of all city properties and their assessed valuation would be a task beyond practical possibility. Not only would it be practically impossible but it would also be unreasonable for it is not at all necessary. In testing water for drinking purposes, or to find its content, the chemist does not test all the water used. Such a course would be no more ridiculous than that suggested in this case and the actual method sampling, used, is as applicable in one as in the other. The success and reliability of the results of such a method depend upon three factors: first, that the samples be taken, in so far as any factors that might influence the result in view, purely by chance. Second, that the location of the samplings be such as to give a just test of the area covered; and third, that the number of samplings be sufficient to justify conclusions based upon them. These factors were carefully observed in obtaining the material for this study.

1. The chance factor was provided for by the obtaining the selling price from the county recorders without their knowledge of the purpose for which it was to be used. Letters were written asking for the desired information and forms inclosed for convenience in reply. No hint was given in either letter or wording of form as to the ultimate goal of the information furnished.
2. The proper location of the samplings was met by sending letters and forms to all counties within the state, and
3. A sufficient number of samplings was assured by the returns of complete figures on 1591 separate transfers.

The data represented by these 1591 cases above mentioned were secured through the kindness and cooperation of the county recorders and auditors of over one third of the counties of the state. They come from 78 different towns and cities widely scattered.

The data coming from these widely separated representative districts of Iowa are shown together in groups based on selling value, and the results shown in the following table.

TABLE I.—GROUPED BY SELLING VALUE

Group	Number of cases	Total selling value	Total assessed value	Per cent A.V. of S.V.
$ to $ 499	120	$ 34,763.00	$ 24,723.00	71.2
500 to 999	135	97,396.50	60,692.00	62.2
1,000 to 1,499	149	174,951.80	97,885.00	55.8
1,500 to 1,999	115	192,824.50	103,000.00	52.
2,000 to 2,499	135	290,265.50	143,936.00	49.4
2,500 to 2,999	145	387,794.00	190,109.00	48.08
3,000 to 3,999	233	771,520.50	342,884.00	44.4
4,000 to 4,999	173	747,684.50	319,436.00	42.75
5,000 to 7,499	254	1,500,872.00	556,631.00	37.
7,500 to 9,999	75	622,115.00	245,540.00	39.3
10,000 and up	57	772,300.00	391,778.00	50.7
Combined.........	1591	5,592,486.80	2,476,614.00	44.2

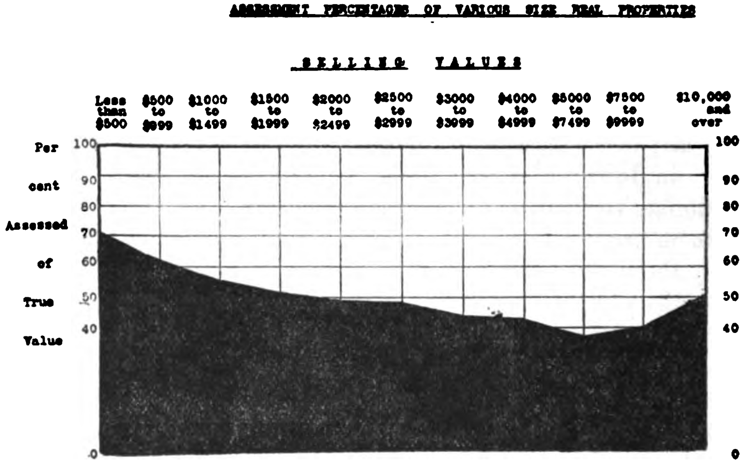
This table contains the answers to questions one and two. Question one: *What is the true index of assessment in Iowa?* is answered by the totals at the bottom of the table. 1591 cases had a selling value of $5,500,000 and an assessed value of but $2,500,000. With the accurate figures this placed the actual average rate of assessment in use in Iowa cities today, not at the legal true value, nor at the value as given in U. S. census figures at 60 per cent but at 44.2 per cent. It is believed that this figure can be more successfully defended as the true figure of Iowa assessment than any other figure now published.

In answer to question two: *Do properties of various sizes bear an equitable share of the tax burden?* one definition must be made. This is in regard to the statement "various sizes." What shall be criteria of size of property. The amount of money actually received in return for a property is believed to be the true index of value in relation to other properties. Answering this question therefore the size of property will in all cases be the selling price. This makes the comparisons drawn absolutely fair and the conclusions therefrom, in this regard, defensable. With this definition in mind table one at once shows the answer to be a *distinct negative.* The last column at the right show the percentage of the assessed value is of the selling value for each group of properties. For example, the 120 properties selling at less than $500 a piece totaled $34,763 market value. Their total assessed value was but $24,725.00. These two figures form the bases for stating that properties of this size are in Iowa assessed at an average rate of approximately 71.2 per cent of the market price. This percentage is expressed in the table in two ways: first, by the numerals, and second by the length of a line drawn under the numerals. Glancing down the table it is seen that the rate of assessment grows gradually smaller as the value of the property increases until this value reaches the $7500 mark. Here the rate decrease ceases and an increasing large percentage of true value is assessed until the rate on properties of $10,000 and over corresponds closely to that on properties of $2000 to $2999.

In addition then *to answering the question with a distinct negative this table furnishes figures showing the various rates of assessment for the various size properties.* And these rates tend to show that the rates on the properties valued at less than $2000 dollars are higher than on any other class of property. That is to say that this class of property in Iowa cities and towns bears a larger share of taxation proportionate to their real value than does any other type of property. The rate on properties valued at under a thousand is much in excess of rates on those over two thousand, being practically double that of on properties of $5000 to $7500. This group $5000 to $7500 represents the lowest rate of assessment, the rates gradually decreasing up to this point and beyond it increasing. The length of lines in the last column illustrate this graphically. These facts are easily explainable by the conditions of assessment in Iowa. Assessments are made in Iowa by local officers, residents of the locality within which they serve and elected by the voters whose property they assess. Localities differ and it is reasonable to expect that they will differ as much in their ideas of assessment rates as in any other item. The man who determines the assessment rate in individual cases is a neighbor of and his election and retention in office is at the mercy of the people whose property he assesses. Such are not conducive to uniform taxation nor is it conceivable that they ever should be. It is but natural and human to expect that in the long run over a large number of cases that class of property which is held by the largest number of the assessor's constituents would be the class assessed at the lowest rate.

Such is at any rate the case, for the town or city property in Iowa with a selling value of from $5000 to $7500 during 1919 and 1920 was by far the most numerous types of property. This statement is supported by the relative number of cases selected on a pure chance basis. The mode of distribution lies in this group but one other group having a number at all comparable. The extremely high percentage assessed on the lower grades of property is explained by one of two conditions. First, if the property is used as a home the social and political influence of the owner is small. Second, if the property is not used as a home the owners do not regard its assessment as closely as they do that of their larger holdings. The former is in most cases the explanation.

These facts as shown by the figures and the lines in Table I are depicted by the following graph.



GRAPH I

This graph represents in its entirety the $5,500,000 of real value of property under consideration. The horizontal lines stand for percentages as indicated at the left of the figure. The vertical lines stand for size of property as indicated at the top of the figure. The part of the total oblong or the $5,500,000 that is assessed and comes under taxation is shown by the black area. If the total true value of all sizes of property were assessed the figure would all be black. If a uniform rate of assessment hold for all types of property the upper edge of this black area would form a straight line running horizontally across the figure. The form that this upper edge takes shows the relative proportion of tax burden that different size properties bear. The relative size of the white and black areas taken as a whole show very graphically the share of property taxed. This last statement is unimportant as compared to that preceding it. It makes logically and practically no difference what share of the real value is taxed so long as that share is uniform for all sizes of the same type of property. The burden of taxation in such a case is distributed as fairly as though the full value in each case was taxed. The only difference being that the smaller the percentage of true value taxed the larger the millage that will have to be levied to carry on public work. Of course where the assessment differs either in types or sizes of property or between taxing units the taxable values of which are combined for the levying of special purpose taxes, inequality will result. A specific example of this is found in the Iowa situation. The assessment rate of different localities is largely a matter of local authority. What this rate is would make no difference within the locality so long as it was uniform. But when it comes to raising state levies which are based upon the local valuations, the community with the lowest rate of taxation bears the lowest burden. This may perhaps be a partial explanation of the extremely low assessment rates obtaining in Iowa and the consequent extremely high millages.

The third question asked: *Do properties of the same size bear an equal share in taxation?* is conclusively answered by data presented in Tables II and III below. Table I and Graph I showed that properties of *different* sizes do *not* bear proportionate shares of tax-burden. This table will as conclusively show that properties of the *same* size do not bear an equal share.

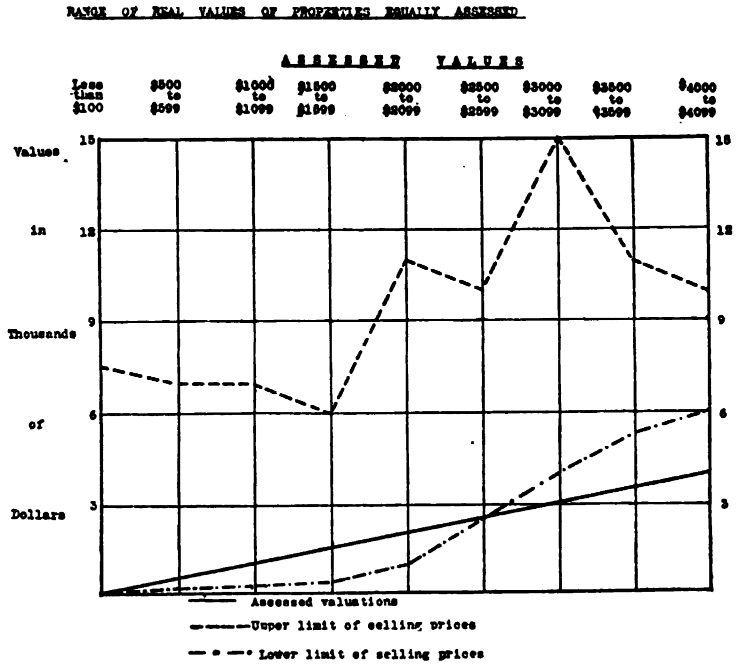
In grouping the data so as best to find the facts in this regard it was found convenient and best to group them on assessment value and show the range in true values. That is, the size of property in Table II is indicated as before by selling price but the selling price is here used as the measure of deviation.

These figures show extremely wide variations in the size of properties all bearing approximately the same tax burden. The first row of figures show that such an instance as the one following might occur. Two men were neighbors. The property of both is assessed at less than one hundred dollars and they are paying taxes on one-fourth of that. Both men within the past two years have sold their property. One man received $7500 and the other $30. This is an extreme case, but the table shows that one-half of the cases would show a range of more than two hundred dollars between the high and low man. These upper and lower limits of the selling values of properties with the

Table II.— Selling Prices of Properties Assessed at the Same Figure

Column I	II	III	IV	V	VI	VII
Assessed value	Number of cases	Selling price				
		Upper range	Quartile 3	Median	Quartile 1	Lower range
$ to $ 99	49	$ 7,500	$ 350	$ 200	$ 150	$ 30
500 to 599	58	7,000	2,000	1,200	1,000	300
1,000 to 1,099	92	7,000	3,000	2,350	1,750	400
1,500 to 1,599	72	6,000	4,250	3,500	3,000	500
2,000 to 2,099	72	11,000	5,700	4,500	3,500	1,000
2,500 to 2,599	28	10,000	6,500	5,250	4,750	2,500
3,000 to 3,099	38	15,000	8,750	6,000	5,000	4,000
3,500 to 3,599	9	11,000	10,000	7,000	5,500	5,000
4,000 to 4,099	12	11,000	9,000	8,500	8,000	6,000

assessed value at which they are assessed are shown in the following graph.



Graph II

In this graph the solid line represents the assessed values as indicated by the footings along the bottom. The broken lines represent the upper and lower limits of selling values indicated by the headings at the left. The immense range within which the assessor allows his sense of values to have play is illustrated here. Three measures of this range here graphically shown are given in Table III.

TABLE III.— MEASURES OF VARIATION IN SELLING PRICE OF PROPERTIES ASSESSED AT THE SAME FIGURE

Column I	II	III	IV	V
Assessed valuation	Number of cases	Selling price		
		Total range	Inter-quartile range	Coefficient of variability
$ to $ 99	49	$ 7,470	$ 200	.5000
500 to 599	58	6,700	1,000	.4166
1,000 to 1,099	92	6,600	1,250	.2660
1,500 to 1,599	72	5,500	1,250	.1788
2,000 to 2,099	72	10,000	2,200	.2450
2,500 to 2,599	28	7,500	1,750	.1668
3,000 to 3,599	38	11,000	3,750	.3130
3,500 to 3,599	9	6,000	4,500	.3220
4,000 to 4,099	12	5,000	1,000	.0588

These data (Column III) show the total range between the selling prices of properties with the same assessed valuation to be in no case less than $5000 and in one case as high as $11,000. On the average the range in selling prices is 35.63 times as great as the assessed valuation at which each is held. That is to say that the chances are even that two men holding properties on which they are both being taxed alike in reality have properties the real values of which show a difference equal to 35.63 times the assessed value.

Column IV of Table III shows the inter-quartile range. This is the difference between those selling prices which when all are arranged according to size, come one-fourth of the way from either end. Between these two selling prices, Brown quartiles, lie the middle 50 per cent of all. They are the 50 per cent that come closest together. The range shown by this 50 per cent or the inter-quartile range as it is here called, is the difference between the highest and lowest figure in the middle 50 per cent. These figures run from $4500 down to $200. On the average the middle 50 per cent of the selling prices show a difference equal to 9.18 times the valuation at which they all are assessed. These figures 35.63 times and 9.18 times show what an immense variation may be expected in properties all bearing the same tax burden. They make the following statement possible and necessary, namely that it would seem *but the merest accident if two properties of the same market worth were to bear equal tax burdens.*

The last column of Table III bears a final confirmation to such a statement. The coefficient of variability here used is that measure derived by the division of the semi-inter-quartile range by the median. One half of the inter-quartile ranges shown in Table III is divided by the median for the group shown in Table II. This gives a comparable of measure variability, for all kinds of cases. In this instance if all the properties assessed at the same value were worth approximately the same value this coefficient would be zero. As the selling prices vary the coefficient increases. Unity represents a variation of extreme magnitude. By glancing at the coefficient given here for the groups it is seen that this measure confirms the statement made at the last of the preceding paragraphs. The answer to our third question can not but be a decided negative with perhaps the statement that the differences in the tax burden that properties of the same size are likely to bear will in most cases be very considerable.

In answer to the fourth question, *Does the size of city influence the distribution of the tax burden?* forty-one of the cities were compared on the bases of rate of assessment and population. This comparison is shown in Table IV below.

The cities in this table are arranged by the rate of assessment figure, the city having the highest assessment rate being placed first, that having the next highest second and so on down for all 41. The figures in the fourth column, headed 'Rank of rate of assessment' gives the numerical position of the towns so arranged. The figures in the fifth column headed 'Rank of size of city' give the numerical position of the same towns arranged in order of size. That is the fifth column expresses the order in which the 41 cities would come if the largest were placed first, the next largest second, etc. on down. Column four and five arranged for comparison. Now if the city having the highest rate of assessment were the largest city the figures at the head of both columns would be one. They are one and eleven meaning that the city having the highest rate of assessment is the eleventh in point of

TABLE IV.—COMPARISON OF SIZE OF CITY WITH RATE OF ASSESSMENT

Column I	II	III	IV	V
Number of cases	City	Rate of assessment	Rank of rate of assessment	Rank of size of city
32	Iowa City	$63.00	1	11
39	Mount Ayr	57.50	2	34
22	Cresco	56.80	3	22
40	Albia	56.28	4	14
13	Marion	55.65	5	20
10	West Liberty	53.30	6	32
37	Decorah	53.20	7	19
40	Centerville	52.10	8	12
16	Davenport	50.90	9	2
95	Burlington	50.00	10	6
10	Mediapolis	49.90	11	39
39	Ida Grove	49.30	12	30
40	Audubon	48.60	13	27
40	Clarinda	48.10	14	17
21	Mount Vernon	47.65	15	37
63	Clinton	46.82	16	5
26	Cedar Rapids	46.80	17	3
36	Denison	46.50	18	21
19	Muscatine	45.60	19	9
12	Lisbon	45.45	20	40
32	Pockwell City	44.50	21	29
33	Pocahontas	44.10	32	38
40	Bedford	43.75	23	28
39	Fort Dodge	48.65	24	8
40	Marshaltown	43.50	25	10
18	Dubuque	42.80	26.5	4
36	Onawa	42.80	26.5	25
40	Atlantic	41.60	28	13
38	Sibley	41.50	29	33
38	Ottumwa	41.40	30	7
10	Calamus	41.25	31	41
39	Greenfield	40.60	32	35
40	Northwood	39.20	33	36
37	Rock Rapids	38.80	34	26
58	Sioux City	37.30	35	1
29	Harlan	37.25	36.5	24
37	Eldora	37.25	36.5	23
17	De Witt	35.90	38	31
40	Spencer	32.75	39	16
36	Carroll	30.80	40	18
37	Estherville	13.76	41	15

size. If the rate got smaller as the city the figures would in all cases correspond. If the rate tended to get smaller as the city the figures would have general tendency to increase. If the smaller the city the larger the rate the figure at the top of column five would be 41, etc. That is to say that if there is any relationship between size of city rate of assessment these two columns would show it. If the relationship is very pronounced inspection would reveal it. If slight the spearman *R* coefficient of correlation would measure it. Inspection of these two columns reveals no specific or general relationship. Spearman *P* coefficient show that no such relationship exists in any degree worthy of the slightest attention. (Spearman's coefficient is a plus .021.) The answer then to the fourth and last question with which this article is concerned is a distinct negative.

CONCLUSIONS

As a summary to the findings of the investigation herein presented the questions discussed and the results obtained are given below.

1. *What is the true index of assessment of Iowa city and town property?* Such property if moneys and credits is assessed at face value, if real or personal it is assessed at 44.2 per cent of its market worth.

2. *Do properties of various sizes bear an equitable share of the tax burden?* Current practice gives no ground for such an assumption. On the contrary actual assessment shows that this share varies from 71.2 to 37 per cent. On the basis of a large number of cases the properties carrying the heaviest burden are those whose market value is under $500 and the property which the lowest tax burden are those selling from $5000 to $7499.

3. *Do properties of the same size bear equal shares of the tax burden?* There is no basis for the assumption, that properties of the same real value will carry an equal share of the tax burden. On the other hand there are many data to support the statement that the burden of such properties will vary and that the range in these variations will be many times the assessed value.

4. *Does the size of the city influence the distribution of the tax burden?* To this caution a flat negative must be returned. The rate of assessment does not correspond to the size of city either positively or negatively. In general size of city does not seem to affect the rate of assessment.

These four questions with their answer and the data given show that the support of Iowa city and town public schools rests upon a very poorly constructed basis. It is founded on a system of taxation which is the result of the early conditions within the state. The first city and town schools of Iowa were purely local affairs. The method of their support differed with the localities. When taxation came to be recognized as the correct type of support the methods of taxation differed greatly. There is no longer need for such variations. They do in fact work a very real injustice. The conditions of assessment are at the base of this injustice. Little improvement in the hit and miss methods the results of which are shown in the data presented, can be hoped for until a complete reorganization of these conditions and methods of assessment is made. With properties of the same size bearing equal tax burdens, with the tax burdens of various sized properties varying in proportion to their true worth a system of taxation which would embody elemental principles of fairness and justice, the support of the public schools in Iowa cities and towns would be on on a very different basis than now exists. The variations and discriminations shown seem to the author to be large enough to warrant the statement that if all real and personal properties in Iowa were taxed at their real worth or at a *uniform* percentage of that worth the problems of school finance which have been so pressing for the past two years would find easy solution and anxiety of those cognizant of the situation in regard to the future support of this most important function of civil life would be very materially lessened.

HIGH SCHOOL REORGANIZATION—SOME PRACTICABLE NEXT STEPS[1]

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THE OPPORTUNITY

There are in the public and private high schools of the United States at any time now about 2,000,000 boys and girls, the pick of our potential manhood and womanhood in brains, bodies, culture and character. From these will come all the professional workers, and nearly all the political and business leaders of the next generation. From them will come a few clever crooks and bad citizens, but the vast majority will make good citizens whether the high school contributes anything towards that end or not. Only a few will, perhaps, naturally advance themselves to the cultural levels familiar to countries that have, or used to have, genuine leisure classes; but all of them will reach the levels of culture symbolized by the Saturday Evening Post, the better movies, the up-to-date hotel, the better type of conventially furnished home, and the more fashionable styles of dress. Very few of them will be failures in a vocational sense, though many will cripple their bodies and anti-socially limit the numbers of their progeny, in their hard pursuit of sumptuary satisfactions and financial security.

These 2,000,000 youths are now being taught by some 80,000 to 100,000 teachers—not far from as many as there are physicians in the United States. The majority of this army of teachers are graduates of liberal arts colleges; while one of the small minorities has graduated from the more general courses in agricultural or technical colleges, and another from normal schools. More than half of them are women, far more than fifty per cent are under thirty-five years of age, almost all are "American stock," very few are of other than fine character, and a large proportion have good professional aspirations, even though the pressure of their work, the traditions of secondary education, and their own innate modesty as yet conspire to keep inside the fenced areas of educational conservatism. The secondary school teaching profession can hardly be said to "function" yet as a profession, though it would seem to promise much for the future in view of its numbers and support. Only about thirty years have elapsed since we began to have departments of education in our universities—since, in other words, men and women began to study *education*, scientifically searching the underlying sciences for the foundations of its aims, methods, and administration, its possible applications of history, philosophy, psychology, sociology, and biology. For a generation now high school teachers have been increasingly coming to their work with at least some appreciation of the general science of their profession in addition to their mastery of the specific languages, mathematics, history, science, and other bodies of knowledge only partially related to the *processes* of education.

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[1] From an address before the New York State Academic Principals, December 30, 1921.

Now, in scores of directions, education is laboring to become scientific rather than *custom-based.* We are applying scientific methods to the study of the varying powers, capacities, or educabilities of those whom we instruct or train. We strive to know more about proper loading for muscles or brain tracts. The social backgrounds of our various classes of pupils are being studied in order to ascertain their helpful or deterrent effects on the possible offerings of the school. The individual traits and the social conditions that may foreshadow the probable future careers of our pupils—cultural, civic, vocational—are being investigated. We are learning to think in terms of *adaption of education*—not so much to individuals, as to fairly homogeneous groups of individuals; and then in terms of *guidance*—first as *informative*, next as *diagnostic.*

Within the last few years several rather hoary educational idols have been toppled from their pedestals. Of these the most obstructive have been the cherished beliefs that liberal education could also function in important degrees towards assuring vocational success and that certain "panacea" studies could assure all-round mental training. No less obstructive have been the ancient prepossessions in favor of *old things*—history, literature, mathematics, foreign languages—as educational means for adolescents generally.

Along with all these changes, partly because of them, there goes a loosening of the bonds of tradition and stale custom. Much of our inheritance of educational belief and practice contains indisputably valuable stores of pure metal; but in the mass it is at best very impure. The dross needs yet to be separated from the serviceable ingredients. Public opinion is now more favorable to the professional promotion of such refining processes than it was formerly. Only our intense preoccupations with the day's urgent tasks prevent many of us from addressing ourselves to the hard work of building the necessary furnaces into which could be shovelled the dump of accumulated dogma, faith, and social habit making up largely the lore and custom of secondary education, in order to refine out some bright metal for our new stock.

SOME NEXT STEPS

We are certainly not ready as yet for fundamental and revolutionary reorganizations in the American system of secondary schools. Possibly we shall never be fully ready for the over-turns that some enthusiasts would like to see, if not provoke. But in the meantime we can all contribute to evolutionary processes. Every secondary school teacher can even now, in at least two respects, materially help to reorganize secondary education. He can will himself to maintain an open-minded, a cordial, and even a receptive, albeit helpfully critical, attitude towards those persons, now numbering hundreds, who have the time, the facilities, and something of special abilities, to investigate and experiment in the various departments of the broad science of secondary education—those departments that deal respectively with social needs, with the qualities of adolescents, with secondary school administration, and with the objectives and, methods of subject matter.

He can, in the second place, keep his lamp so filled and trimmed than when, from any source whatever, comes clear evidence of accomplished improvement—in aims, methods, or administration—he will be prepared to step into the procession of the sane, even though safe, innovators and progressives.

But to a great extent these participations call only for passive attitudes. Are there not areas in which high school teachers and especially principals, can play dynamic parts during the next few years? It is the strong conviction of the writer that there are several such areas wherein even the old-fashioned methods of rigid intellectual analysis, clear-cut definition of terms, and massing of expert opinion on values, can be of very great service in helping current progressive movements in secondary education.

Here are a few of the contemporary vital issues which would seem especially to demand present discussion and early settlement:

1. The high school teaching profession should refuse longer to bow the knee to, and annually to pass under the yoke of, college admission standards.

2. High school principals and teachers, the custodians of liberal secondary education, should refuse longer to corrupt honest vocational education by enticing its feeble imitations into partnership with regular high school studies, and in turn they should refuse to allow various "gold brick" forms of vocational education to corrupt the cultural and civic education for which the true general high school should stand.

3. But, in order to provide full justification for such action, high school men and women should unite in giving better definition, formulation, and documentation to the essential characteristics, the primary objectives, and the basic methods of *liberal* or *general* education as that may be appropriate to American youth preparing to live full and rich lives in the 20th century. We should, therefore, no longer allow our minds to run on the one-track pedagogy inherited from the days when algebra and classic languages commonly constituted the staples of secondary education. Certainly we ought to be ready to recognize in the composition of true liberal education at least two basic and very dissimilar types of elements—powers of appreciation and powers of execution—each resting on its own distinctive foundations of pedagogy.

4. We should, furthermore, recognize that perhaps fifty per cent of the pupils entering our high schools, though honestly in quest of further general education beyond that given by the elementary school, cannot, and perhaps in many cases should not, remain throughout a full four years course. Genuine recognition of the conditions and needs of these will lead to provision for them of far more satisfactory courses than are now available.

CURRICULUM CONTROL BY HIGHER INSTITUTIONS

The higher institutions of learning, liberal and vocational, constitute an extremely important wing of our system of schools. It has always been recognized, and always should be recognized, that their functions in society can be adequately discharged only on condition that they receive as students young persons of superior endowment and preparation. One of the obligations of a system of secondary schools—but only one—is to help discover the right candidates for higher institutions, to encourage these to move in that direction, and to give them such preparation as can be demonstrated to be worth while at this stage of their development.

But this obligation is, or should be, conditioned in at least two ways. First, college entrance standards should not be permitted to control *all* the objectives of high school education (unless all the pupils have reasonable expectations of entering college). Second, even in the case of students preparing for college, the high school should not permit requirements to be dictated which have no clearly proven function as part of such preparation.

In both these respects, it would seem that our high schools, in spite of some notable advances in recent years, still permit their non-college preparatory students to be victimized as respects a secondary education that should be truly functional for them. Most higher institutions have materially liberalized their entrance requirements in recent years as respects uniform prescriptions of *subjects;* but as yet, they almost completely dominate in determining the *content* of courses. What shall constitute ancient history, French, or physics is even yet determined almost wholly with reference to what colleges require, and only very slightly with reference to what educators might find, if they investigated, to be the actual needs of non-college preparatory students.

Even more serious, perhaps, has been the persistent tendency of higher institutions to impose requirements that have no proven value as *preparatory* training. No informed person would dispute the desirability of requiring that students entering engineering colleges should bring as ready tools, working powers in algebra, plane geometry, and even trigonometry. But why should prospective entrants to normal schools, liberal arts colleges, and colleges of law be similarly required to bring these tools? Doubtless the students who in high school have successfully run the gauntlet of these subjects will be found to be more able-minded than those who have failed in this special kind of race; but can we devise no simpler means of discovering able-mindedness?

Another widely prevalent practice of higher institutions, too, should be severely condemned and obstructed—that, namely, of requiring students to bring certain alleged tools for which in fact the higher institution never finds sufficient use to prevent them from rusting to destruction. A certain well-known engineering college requires all entrants to present *two* modern languages. Only a negligible proportion of its students are required during their four or six years in the institution to put these tools to the slightest effective use. Naturally and inevitably they waste away. America certainly needs leaders who can use French, Spanish, or even Japanese; but why continue to humbug ourselves with the belief that our present unscientific college entrance standards in modern languages are in the least helping us towards desirable goals here?

However, it is futile and ungracious to find fault with the higher institutions so long as the secondary school profession in its collective capacity lacks clearly defined and dynamic convictions as to what secondary education should accomplish—principally for that majority of its students who will not enter higher institutions, of course. "The world stands aside for the man who knows where he is going." The colleges will stand respectfully aside when secondary school men know where they want to go on behalf of the better civic, cultural, and physical education of their two million pupils.

VOCATIONAL EDUCATION IN HIGH SCHOOLS

The last twenty years have witnessed a tremendous expansion of public or social purpose to provide through schools adapted to that specific end better vocational training and instruction than that given either by the apprenticeship methods or the "pick up" methods which are the only methods of vocational education now available for nearly ninety-five per cent of our prospective workers. Many years ago we began developing very good vocational schools indeed for certain aristocratic vocations—medicine, theology, agricultural specialist service, elementary school teaching, military leadership, pharmacy, engineering, and the like. Out of the rather aimless commercial courses which, for peculiar social reasons, have been evolving for many years on the "weak side" of our public high schools, there is emerging fairly definite vocational training for the trade of typist and stenographer. But it is only since the educational yesterday that we have as a people begun to think seriously about the provision under public support and control, of vocational schools designed to correct the frightfully wasteful and ineffective methods heretofore prevailing in the "pick up" vocational education of the great mass of farmers, builders, homemakers, salespeople, factory workers, miners, sailors, and the like.

As far as expression of intention is concerned the public is now clearly committed to the promotion of widespread vocational education. But ways and means remain largely to be worked out through the slow and painful stages of invention, experimentation, popularization, trial, and administrative organization. A trained personnel remains yet to be developed even in many tested fields of vocational education. Every social economist is probably convinced that we are destined to go forward in the movement for provision of public vocational education until there will be scattered as widely as may be necessary specific vocational schools for each and all of the more than 2000 distinctive vocations now making up our complex economic life, and until there exist means whereby every youth, and every adult not yet settled in his final vocation, shall first be given opportunity, and next, if necessary, be brought under compulsion, to equip himself specifically and completely for some form of life work.

But it is a very great mistake to assume, as some educational theorists have assumed, that *vocational courses* can be effectively incorporated with *courses of liberal education.* It is a very great mistake for principals and faculties of high schools intended by the public and by statesmen to be primarily good schools of *general* education to divert their energies towards the building of what must usually prove to be cheap little annexes of *vocational education.* That they should be friendly supporters and constructive critics of the efforts of others to provide vocational secondary schools is, obviously, their right and their peculiar obligation.

Of course the public, and even its best informed lay representatives at times, will blunder into thinking that vocational courses can readily and properly be "tacked onto" the high school curriculum, and that groups of students and teachers can be naturally so differentiated as to effect an easy development of vocational departments. It appears to these men that just such a process has happened in high school commercial education and is now happening in the proliferation of "Business Administration" in liberal arts colleges. They think it is capable of indefinite extension.

Clear thinking is essential here. Obviously, a vocational school can, conveniently or inconveniently, be "located" in a high school building. A few very large high school buildings (designed for technical instruction) possess fairly commodious machine shops, printing shops, and even foundries. But a building is not a school. A school is a group of students, a teacher and some needed equipment for instruction or training.

Obviously, too, a student can divide his working day between vocational "studies" and liberal studies as he now sometimes divides his working day between high school studies and vocational pursuits for wages.

Again, it is always practicable to offer in high schools studies or practices that, to the uninformed observer "look like" vocational training or instruction. Cabinet making, machine shop work, text book agriculture, mechanical drawing, bookkeeping, laboratory kitchen work—all these and others can readily be made to present the specious appearance of somehow fitting youths for practical participation in the productive work of the modern world. Students are now, in large numbers, being deceived by these "vocationally flavored" courses, which are occasionally developed because it is believed in some quarters that these studies can be made to "motivate" the liberal education for which the high school should properly stand.

A large proportion of the public is, as stated above, now convinced of the desirability of providing at public expense and under public control for school vocational training for hundreds, if not thousands, of vocations; but just so soon as these leaders discover the necessary conditions of effective vocational education they will probably ask the present high school to get altogether out of the business of trying to give vocational training, and to return to its historic, and as yet only imperfectly discharged, function of giving a good liberal education.

The most obvious, but not the most fundamental, reason for this is that vocational schools cannot, except for two or three very numerously followed vocations be located where liberal arts high schools are located. High schools are located at points of optimum accessibility to all the residents of a given area. But the location of any particular type of vocational school must be determined, in the first place, by the availability of facilities for productive work (as part of the means of effective training), and in the second place by conditions of optimum accessibility for those selected candidates from a wide area who elect that particular vocation. Why is the vocational college of medicine never located in the smaller town, and almost never, in the large city, on the same site as the liberal arts college? For the very good reason that it must bring its students to the center where most of the "productive" work essential to their vocational education is being done. A suburb in New Jersey or a small city in upper New York may have this year 2000 boys and girls who are fourteen years of age. Ten years from now these 2000 will probably be distributed among at least three score vocations. How would it have been possible to provide sixty different vocational schools alongside or in the buildings of the public high schools of those two cities?

We may as well frankly recognize that all proposals for the vocationalizing of our high schools come from persons who have not yet seriously examined into the desirable objectives, the specific character, and the necessary administrative conditions, of genuine vocational education in schools. These writers speak of "industrial education" as though there were in this category only a half dozen intimately related vocations instead of the nearly two thousand specific callings, many of them showing no points of relationship to each other, which are found in the factories, mines, and forests, and on the railroads, of this industrial nation. They use such phrases as "business arithmetic," "shop mathematics," and "salesmanship" as though these corresponded to certain concrete realities in the world of productive effort.

There is only one vocation (homemaking) that is so widely distributed and in which productive effort is so closely related to homes that vocational training schools or departments for it might profitably be located in many high schools, even though most of the really interested students in such a school will eventually be, in all probability, of far more than customary high school age, since under social conditions prevailing in America it is hard to discern any real future demand for vocational homemaking education for women under twenty years of age.

In rural areas where agricultural vocations make a vital appeal to the rising generation, it may often prove very desirable and expedient to locate the first or preliminary vocational school of farm training in connection with the high school, for reasons that cannot be amplified here.

The trade of stenographer and typist is one for which commercial departments located in high schools sometimes now give fairly good training. Since this vocation is followed almost exclusively by girls, and since their average tenure in this vocation probably does not exceed four years, the numbers to be prepared are so large and the processes of training so simple, that the location of such schools in high school buildings may be found to be a permissible practice even when right vocational standards for this calling shall have been more adequately defined than they are at present.

One other condition, sometimes making practicable an intimate juxtaposition of vocational and non-vocational secondary schools, will be found. In many cities and towns there is a dominant industry in which facilities for productive participation are not unduly remote from present locations of high school buildings. Vocational schools for these lines of production—machine shop in Worcester, textiles in Lawrence, shirt and collar products in Troy, automobiles in Detroit, furniture making in Grand Rapids or Jamestown, and many other examples will be found—might well be annexed to the local high schools for the social advantages that would result.

But for the great majority of vocations training schools will have to be located as are now training schools for the vocations of medicine, law, dentistry, elementary school teaching, agricultural leadership, and military leadership—that is, at places sufficiently central to bring together on the one hand an optimum number of students and on the other to provide facilities for participation in production.

We must, therefore, disabuse our minds of the aspiration that general and vocational education should be pursued concurrently during "working" hours. Here again clear thinking and careful use of terms are necessary if confusion and injurious misapprehensions are to be avoided. All approvable men and women, of course, continue their civic and cultural development whilst carrying on their vocations—*but they do not seek to mix or blend the two unlike types of activity during working hours.* Leisure seasons, evenings, holidays, non-working time—these they give to reading, music, sociable intercourse, politics.

So should the student in that preliminary stage of vocational participation—that of vocational training—keep alive and continue his liberal education—but outside of proper "working hours."

He has, of course, given the full time of his working hours to the acquisition of general education from the age of six to fourteen. In a constantly increasing number of cases he will have given full working time to this purpose also to the ages of sixteen or even eighteen. Even now, if our high schools would profit by their opportunities, they could do much for the future liberal education of that thirty to seventy per cent of all American children whose parents desire them to get at least two years of general education beyond the eighth grade.

But when the time comes for the youth to elect full-time vocational practice or full-time training for vocational practice—as it must still come to some unfortunates as early as fourteen or fifteen, and will certainly come to all the others, except a few parasites, sometime between the ages of sixteen and twenty-two—he should be permitted and encouraged, for the sake of morale, as well as of efficiency, to give the undivided effort of his working hours to the new task. He is required to do that now in training for all those higher vocations, participation in which is customarily preceded by school vocational education—medicine, dentistry, pharmacy, elementary school teaching, and theology. He is increasingly expected to do so in engineering, architecture, and journalism.

Attempts to impose pedagogical interdependence of general and vocational education on the basis of concurrently pursued studies during working hours will almost certainly defeat the best purposes of each. Psychological reasons for this will probably be found to be even more important than administrative reasons. But the full measure of injury done will not, of course, be evident until the objectives of both vocational and liberal education shall have been more clearly defined and evaluated than they are at present.

Hence emerges the writer's strong conviction that the "high school"—the historic "peoples college of extended general or liberal education"—should give up all attempts either to vocationalize itself or to gather under its stepmotherly wing a host of anemic little vocational departments. Let this high school give its undivided attention to the improvement of the character and varieties of the truly general or liberal education which constitute its mission. Here will soon be found not far from half of all American children from 14 to 16 years of age. Consider the opportunities open to the high school—opportunities only slightly apprehended as yet—of giving during even these two years alone to laying broader foundations of personal culture, civic insight, and physical well-being on behalf of so large a proportion of those who will in a few years be the more influential of America's citizenry!

No man can serve two masters. Neither can the liberal arts high school any more than the liberal arts college serve the two largely opposed masters of general and vocational education. Vocational schools of less than college grade, the very extensive development of which during the next two decades may confidently be expected, will properly be classified as members of a system of secondary schools—but in no true sense of the word can they be called "high schools" any more than they could, a few years ago, have been called academies. A system of secondary schools is like that system of colleges which, in the proper sense of the term, compose a university—one or more are advanced schools of general learning while several, perhaps a multitude, are schools for specific vocations.

There are certain even profounder reasons to be discovered than those given above for the separation of schools of vocational, from schools for general, education. American vocational education, in order to become democratic (it is far from that now), must work steadily against what President Butler recently called economic "closed doors." It is a safe prophecy that a quarter of a century hence there will be far more systematic full-time school vocational training for persons upward of twenty-one years of age than for those under that age. The large majority of workers in the industrial and commercial vocations shift callings many times before they finally settle down. This process is now horribly blind and wasteful, as revealed in studies of "labor turnover." Proper vocational guidance, followed by vocational training—some for persons from 15 to 21, more of it between 21 and 30—can do much to economize and regularize these transitions, many of which are the necessary out-growth of extended subdivision of labor. Genuine vocational schools must be integrated into the vocational fields which they serve—no less in commercial and industrial callings than in homemaking and farming calling—notwithstanding that, to be democratic they should be under full public support and control. These conditions are impossible of fulfilment if vocational schools are to be integrated into schools of general education.

One other statement is necessary to prevent misunderstanding. In the curricula of genuinely functional liberal education likely soon to be developed, prominence will certainly be given to a variety of short or long courses designed to interpret, in some measure, the *past*, in even greater degree the expected *future*, but in fullest practicable measure, the *present*, of our political, economic, and cultural collective life. The most fruitful course prescribed for all freshmen in Columbia College is now "Contemporary Civilization." But if such a course is needed there, are not similar courses, adapted to lesser capacities, still more needed in high schools? But some of the best of the potential courses for high schools may well be so designated as to suggest that they are designed to minister to vocational ends, if we are not careful. Why should not urban youth have access to a purely cultural course designated as "Agriculture in the United States." As means of civic education ought we not offer high school courses in "Current Economic Problems in the United States?"

Possibly there ought to be offered in large high schools appreciational courses centering in the major vocational fields—home economics, American business, modern industry, agricultural science, the sea borne commerce of the world, and the like.

The practical conclusion for the high school faculty? Let it quit "playing at" vocational education. Retain the schools of homemaking and of stenography, and develop a school of draughtsmanship, if it appears that these, as annexed to high schools, can be made really efficient. But leave the development of the other scores of vocational courses to those specialized faculties that can make them what they should be. In the meantime make the American high school a genuinely functional school of civic and cultural education—a true "Peoples' Liberal Arts College."

CREDIT DISTINCTIONS FOR DISSIMILAR OBJECTIVES

But suppose we agree that the primary purpose of the high school is *general education* beyond that given by elementary schools—do the words "general education" denote, at this level, anything at all definite, anything of real substance? Personally, I *like* the word "liberal" or liberal arts education as broadly indicative of the purposes of the true high school. Some of my friends prefer the word "humanistic." Not a few writers have so expanded the terms "cultural" and "civic" as to cover much of what idealists desire under general education.

The melancholy and challenging fact is that we possess as yet no analyses and definitions of the specific and adapted aims of general or liberal secondary education adequate to the establishment of a scheme of objectives realistic enough to guide educational practice and to test educational results. College entrance requirements are, as previously stated, definite enough, perhaps too definite, as formal specifications of certain ends to be achieved, presumably through instruction and training. But how are these formal objectives related to the ends of true liberal education? Here we find only hopes, aspirations, faiths—in even the best educational writings of this and other countries. And of assured knowledge we seem to have next to none at all.

There are, of course, certain broad justifications for these faiths. Quite obviously those men and women who, at some former time, graduated from our high schools embody and express more of the qualities that by common consent constitute culture and good behavior than do those who did not enter high school. To be freed from the responsibilities of self-support and the responsibilities of learning a vocation during the plastic years from 14 to 18 opens many large opportunities for growth in culture and civic insight of very manifest kinds. If these opportunities include extensive contacts with books, substantial periods of association with superior men and women, and much voluntary cooperation and "mixing" with the selected personalities normally composing high school student bodies, then indeed, it can be truthfully said that, within limits, high school attendance and participation alone constitute valuable components of a "liberal education."

But what of the studies themselves—the expensive instruction and training which are the immediate primary purposes for which the community provides the free, palatially housed, high school? In what respects, for whom, and to what extent do these now make substantial contributions to genuine liberal education? We may have expectations and beliefs here, but we possess little certitude, almost no scientific understanding.

For the present we can certainly make some progress by giving "credit recognition" to as many kinds of educative activity as practicable instead of, as now, restricting it only to traditional studies.

The algebra, chemistry, and foreign language grammar in which high school students are drilled doubtless possess some educational value for all, possibly much value for some. But so also do the physical sports, the club activities, dances, and the other voluntary activities in which students indulge. The debates, dramatic activities, musical recitals, "current events" classes and other cooperative "enterprises" in learning which gifted teachers and principals sometimes initiate and guide have *their* values which, again, may be very great indeed for some pupils. Outside the school many students, according to interests and environmental influences, read abundantly of library books or of newspapers and magazines, freely patronize the movies, take music lessons, share in the work of farm, home, or shop, work with the Boy Scouts, take actual part in church functions, or earn wages on their own account. All these things are educative—perhaps harmfully educative at times. Some probably possess educative values far beyond anything that our formal and rather thin secondary school pedagogical theory can yet envisage and evaluate.

The historic or prototype secondary schools—some of which still survive in America no less than in England, France, and Germany—

recognized no official concern with any but "the studies that really educate"—as an upholder of the traditional pedagogy would put it. English boarding schools seem always to have tolerated not only sports, dormitory self-government (often of oligrachic rather than democratic kinds), and a great deal of "social education" through the never-ending club intercourse in dining hall, on playground, and in study rooms; but they also smiled half-indulgently and half-contemptuously on the collecting of "bugs," the "fooling" with electricity, and the avid "bookish" interests of many of their most enterprising and promising students.

Contemporary educational ideals are, however, set against permitting so much good water to run to waste or at best only to sustain by chance some vegetation along the banks of the stream. It thinks in figures of conservation, of purposive irrigation. The soil out of which spring the less harmful "natural activities" of adolescent youth is now conceived as a fertile soil, capable, under cultivation, of producing rich crops instead of some wild fruits and flowers—and weeds!

But our official educational machinery is not only unsuited to the realizing of the new purposes—much of it severely blocks the way to needed reforms. The gradings, credits, certificates and diplomas which attest standing and confer distinction, apply only to the formal studies. Laboratory and shop work were allowed "credit" only after a long campaign. Each new subject introduced must run a long gauntlet before it can be given a certificate or diploma of recognition.

Probably these difficulties attending the adoption of new studies are not undesirable so long as the word "credit" stands for just one type of educational product. Certainly it would appear ridiculous to propose that attendance on movies should be given the *same kind* of credit as systematic study of foreign languages. Ought football activity be credited in accordance with the same standards as laboratory work in physics? Participation in young peoples society work in churches may be, for some, highly educative, as respects moral growth, acquisition of experience, and preparation for useful living; but could any high school give it credit on a par with drill in mathematics?

The immediately practicable solution of the problems here implied—that is, of promoting and duly recognizing *all* kinds of worthwhile educational values—is the development of at least two kinds of school credits which we can, for convenience, designate respectively as *alpha* and *beta* credits. Let alpha credits be given only for those educational results that are, on the one hand, *projective*—that is, of which the principal use, outcome, or functioning lies years ahead in adult life—and on the other are the products of *training* or *drill.*

Let beta units be given for those types of educational activity which are, on the one hand *developmental*—that is, of which the principal conscious outcomes and satisfactions lie in the present—and on the other are the products of relatively *naturalistic* learning.

Systematic training in abilities to use a foreign language or mathematics obviously should give alpha units, at least in the case of all those students who will probably put to some genuine cultural, civic, or vocational use the powers thus expensively acquired. Dancing and field sports ought, no less obviously, to be given beta credits in the case of all those who pursue them with zest and in accordance with the standards for developmental education which the proper authorities support.

A certain proportion of high school students are not only willing, but eagerly desirous, of doing large amounts of reading outside of school hours and of school terms. Their more or less spontaneously developed tastes are sometimes on the Saturday Evening Post level, sometimes on the Atlantic Monthly level. In either case it is possible for genuine "teachers of literature" (of whom we have as yet precious few among our high school English language teachers—and for the very good reason that we have never seriously tried to get them) to cooperate with these eager self-educators in widening the range, deepening the appreciations, and supplementing with helpful suggestions, their cultural readings. But there are many reasons why this individual play-like, out-of-school activity, valuable as it is, should not be paid for in the same currency as that provided for classroom training in "hard work" subjects that are but remotely related to present natural interests, however important will be their contributions to later culture, productive work, and social service.

In contrast with general reading let us take chemistry, mechanical drawing, bookkeeping, or typewriting. Though the actual objectives of these are still ill-defined in secondary school pedagogy, it is probable that their controlling purposes should be vocational or prevocational. In either case they possess only *deferred* or *projective* values for students. In either case they should not be studied unless they can be studied *long* and *well*—that is, unless the study gives the kind of detailed and accurate training in technique and towards the accumulation of exact knowledge of the kind that will persist with little impairment well into adult life.

Work in these fields obviously deserves alpha credits, at least on the part of all those who will probably at later dates use to social advantage the expensive training thus offered.

The importance of differentiating credit values for at least the categories of objectives here under consideration arises primarily from the fundamental and inescapable fact that *methods in the two fields are not only very unlike, but more or less mutually hostile to each other.* The *best* methods for the alpha subjects are very probably the *worst* methods for the beta subjects, and vice versa. The best methods for the beta subjects certainly involve a very large proportion of the play spirit at its finest. No less certainly, the best methods for the alpha subjects involve the work spirit in its higher forms. Physical, intellectual, and social play are as old as the race—they are the ancient methods of growth, of development. Physical and social work of prolonged and routine character are probably not one hundred centuries old, even among the stocks cradled in the north temperate zone; whilst true intellectual work began only in that historic day-before-yesterday when our forbears in Europe settled down to tillage and the building of towns. Work, and even more, training for work, are highly artificial things, imposed, if not by Adam's offense, at least no earlier than his time by man's determination to be civilized. Play is an ancient heritage almost as natural as eating and resting and sleeping —and this applies hardly less to play of mind and social fellowship than to play of "big" muscles.

Education towards beta objectives can readily and economically be greatly individualized. Efficiency and economy in education towards alpha objectives seem always to have required the regimented and disciplinary procedures still familiar in all secondary schools. Perhaps such procedures are here unavoidable, just as system, organization and substantial amounts of regimentation seem unavoidable in large scale and efficient economic production.

Supervision, direction, conference, and testing can be intermittent, occasional, and often dispensable in the pursuit of beta objectives. No such laxity may be tolerated in proper training towards alpha objectives, at least if historic experience is any guide to the inherent nature of any but very exceptional adolescents.

TWO-YEAR GENERAL HIGH SCHOOL CURRICULA

The American high school has long perpetrated one form of cruel wrong-doing for which its democratic aspirations should years ago have taught it to find corrective measures. We are delighted and proud that the public high school draws its students hardly less from the ranks of artisans than from those of professional men and merchants. We hope that ere long large proportions of those who must be manual workers shall have had something of high school education.

But we complacently shut our minds to the great economic fact that in the case of families of normal size—from four to six children—only men of exceptional earning power can afford to keep their children in full-time schools up to eighteen years of age. Educators write papers and cite statistics as to "high school mortality." The stupendous thing in modern high school evolution is not high school mortality at all, but high school "vitality." The really significant and hopeful thing, sociologically considered, is not that so many pupils "drop out," but that so many enter and stay for at least one or two years.

Because of ancient academic tradition and subservience to college admission standards, we usually permit from 50 to 70 per cent of all those youths who have entered our high school to leave after attendance of from one to three years with no kindly good-bye and not a single token of recognition. Even worse, we permit a kind of rumor to go abroad that they are "failures." They must leave furtively, asking for no ceremonially conferred tokens symbolic of their effort and achievement.

Hundreds of thousands of youth each year enter high schools who in the very nature of the case cannot stay four years. They and their parents are asking for some educational bread and we give them little but stones—mostly in the shape of algebra, the beginnings of a modern language and some very formal English. It is submitted that our policy here constitutes an educational crime of the first magnitude, if it is permissible to characterize as crimes, omissions and commissions that are chiefly due to a kind of deep-rooted social stupidity for which in the last analysis all society is responsible.

Every high school should, in the writer's estimation, offer one or more flexible curricula designed as fully and richly as practicable to provide for the further liberal education of youths who at or about fourteen years of age have completed elementary school work and who need, and can afford to take, two more years of general education. We ought to have a body of educational literature built about this ideal. The reform suggested can be inaugurated in any high school next week if the faculty spirit is willing. Take from the present offerings—in literature, general science, English language, practical arts, history, social sciences, and others—those studies one or two years of which would probably be well worth while for the types of students under consideration. Such a flexible curriculum should be constructed in the light of the studied needs of some well-defined case group as follows:

Given, in an industrial city, 300 boys, 14 years of age, who have finished the eighth grade and whose family and other circumstances indicate a strong probability that they can and will remain but two years in high school. These boys come mostly from "working class" (manual laborers) homes where families are large and family income not in excess of $2200 per year. The boys will probably become manual workers and clerks themselves, but it is to be hoped on a slightly higher level than their parents. They must become substantially self-supporting at 16, or about; and that is usually the best age also for them to enter apprenticeship or to begin as factory "helpers" if they are to become vocationally efficient. Most of them are of not far below the average or of only slightly superior ability—their very ablest brothers and sisters will usually be helped to other vocational destinations, even at great parental sacrifices.

THE FORT WAYNE PLAN OF STUDENT TEACHING, OBSERVATION AND REPORTS

JESSIE A. LANE
Detroit Teachers College

(Continued from January issue)

TWENTY-EIGHTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the lessons planned last week.

READING, OBSERVATION, AND REPORT

Lesson for Appreciation

What does the term "appreciation" mean to you? Give an example in explanation.

Explain the difference between aesthetic, social, and intellectual appreciation.

Of what value to the child is the lesson for appreciation?

Using the following outline describe one appreciation lesson of each of the above types which you have heard taught this week.

1. Preparation.
2. Presentation.
    (*a*) Lecture.
    (*b*) Coöperation.
    (*c*) Illustration, or
    (*d*) Creation.
3. Summary.

Readings:

Maxwell: "Observation of Teaching," pp. 84–90.

Strayer: "Brief Course in the Teaching Process," pp. 78–84, 202–207, 212–214.

From the twenty-ninth week to the thirty-sixth week, inclusive, each student should have entire charge of the room to which she is assigned during one and one half hours per day, four days per week, this time, if possible to consist of consecutive periods. Written plans should be prepared for every lesson taught. At the beginning of each lesson plan the student should state the type of lesson and give the reason why she thinks that type should be used. In the plans prepared this week there should be included, one lesson for appreciation, one inductive lesson, and two deductive lessons. In each of these plans state how the McMurry standards are met.

TWENTY-NINTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Take entire charge of the room for one and one half hours per day.

*Teach the lessons planned last week.

READING, OBSERVATION, AND REPORT

Examinations and Tests

What is the purpose of an examination or test?

When should tests be given?

Under what conditions should the standard tests be given? tests organized by the teacher?

In tests organized by the teacher what type of questions should be asked?

Of what use are the results obtained by examinations and tests?

How can one best test the results of teaching in Grades I, II, and III? Answer with regard to specific subjects.

Readings:

Bagley: "Educative Process," pp. 333–334.

Earhart: "Types of Teaching," pp. 189–190.

Strayer: "Brief Course in the Teaching Process," pp. 102–105.

Thorndike: "Principles of Teaching," pp. 256–264.

Monroe: "Measuring the Results of Teaching," Chap. 1.

In the lesson plans for next week include two appreciation lessons. Prepare tests to be given in two subjects.

THIRTIETH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the lessons planned last week.

*Give the tests planned last week. In a written statement summarize the results obtained by these tests and make recommendations with regard to material and method of future lessons in these

READING, OBSERVATION, AND REPORT

Readings:

Monroe: "Measuring the Results of Teaching," Chap. 7.

After carefully studying the explanations and directions given in the above reading, each student should subjects. Hand this statement to the training teacher for criticism and correction.

prepare a timed-sentence spelling test based upon the Ayres scale. After the test has been prepared, the student should give it to the training teacher until she has thoroughly mastered the technique involved.

Students in Grades I and II will prepare the test for a higher grade which will be assigned to them for the purpose.

In the lessons planned for next week, include one drill lesson, one topical recitation lesson, requiring the use of illustrative material, and one question-and-answer recitation lesson in which all pivotal questions are thought questions.

THIRTY-FIRST WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Give the spelling test planned last week.

*After these tests have been given the training teacher will teach the students how to score the results and how to make a graph showing the individual and class scores with reference to the standard. After the graph has been made each student should write out recommendations with regard to the material and method in future lessons in spelling. These recommendations should be based upon the results obtained in the test. (For discussion of remedial measures. refer to Chap. 7, Monroe's "Measuring, the Results of Teaching.")

READING, OBSERVATION, AND REPORT

Projects

What is meant by "teaching by projects"?

Wherein does this type of teaching differ from the old formal type? In what respects is it an improvement over the old type?

In your own words, distinguish between the two types of projects described by McMurry.

Describe in detail one project of each of the above types which you have at some time observed in the training school.

Readings:

McMurry: "Teaching by Projects," pp. 1–33.

Freeland: "Modern Elementary School Practice," pp. 369–381.

Include in the lesson plans for next week, one question-and-answer recitation, one dramatization lesson, one study lesson and one inductive lesson. In each of these lesson plans, state how you expect to meet the McMurry standards when teaching it.

Prepare test questions for a test in one subject.

THIRTY-SECOND WEEK

Student Participation in Class-room Duties

*Teach the lessons planned last week.

*Give the test for which questions were prepared last week.

After the tests have been given, make a statement concerning the information you have obtained from the results.

Reading, Observation, and Report

Projects (*Continued*)

Is it possible for one to teach by projects without neglecting the units of subject matter prescribed in a regular course of study? Explain fully.

Plan in detail one project of the first type as described by McMurry. This project must be such as can be completed within two weeks after it is started. The plan should provide for the following details:

1. Teacher's aim.
2. Pupil's problem.
3. Preparation. (This should indicate the manner and the class period in which you expect to have the problem raised and how you will develop your plan from the suggestions which the children will *probably* offer.)
4. Organization of class.
5. Method of procedure.
6. The units of subject matter from the regular course of study which you expect to teach in connection with the project.
7. Necessary materials.

Readings:

For suggestions and examples of projects see:

Dobbs: "Illustrative Handwork."

Dobbs: "Primary Handwork."

Twentieth Year Book Part I.

Current numbers of the *Primary Education Magazine*.

Plan lessons for next week's teaching.

THIRTY-THIRD WEEK

Student Participation in Class-room Duties

*Teach the lessons planned last week.

*Begin the project planned last week.

Keep an exact record of the manner in which the project was started, the manner in which it was carried out, the difficulties which you met and how they

Reading, Observation, and Report

The Review Lesson

In what sense does a "review" mean a "new view"?

What is the purpose of a review lesson? When should a review lesson be taught?

were overcome, the units of subject matter which you were able to teach or to drill upon during the progress of the project and the results obtained with regard to subject matter learned and desirable personal or group characteristics developed.

What are the characteristics of a good review lesson?

Give an example of material which could be reviewed by means of an appreciation lesson, a dramatization lesson, a topical recitation, a deductive lesson.

Outline two good review lessons observed this week. Why "good"?

Readings:

McMurry: "Method of the Recitation," pp. 152–155, 223–224, 174–181.

Klapper: "Principles of Educational Practice," pp. 215–218.

Bagley: "Educative Process," pp. 331–332.

Strayer: "Brief Course in the Teaching Process," pp. 101–104.

Plan the lessons to be taught next week.

After carefully studying the explanations and directions in Monroe's "Measuring the Results of Teaching," Chap. 4, learn by the method explained in the thirtieth week's program the technique of giving the Courtis Arithmetic Tests, Series B.

THIRTY-FOURTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Give the Courtis Arithmetic tests to one class, score the results, and make a graph showing the individual and class scores with reference to the standard.

Students in the first three grades will be given an opportunity to give these tests to a higher grade class.

*Make a list of the deficiencies in training as revealed by the tests and state where further class drill is needed.

READING, OBSERVATION, AND REPORT

Oral Reading Tests

Readings:

Monroe: "Measuring the Results of Teaching," Chap. 3.

Study the technique involved in giving the Gray Oral Reading Test. Practice by giving the test to the other students and to the training teacher.

Include in the lesson plans for next week, one appreciation lesson, one inductive lesson and two review lessons and one deductive lesson.

THIRTY-FIFTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

*Teach the lessons planned last week.

*Finish the project.

Give the Gray Oral Reading test to one class of children. (While the student gives this test the training teacher should remain in an inconspicuous place in the room and make note of any errors of procedure on the part of the student.)

Score the results of the test and make a graph showing the individual and class scores with reference to the standard.

Make a statement of the types of errors which occurred most frequently and suggest measures which might be taken to eliminate them.

READING, OBSERVATION, AND REPORT

Silent Reading Tests

Readings:

Monroe: "Measuring the Results of Teaching," Chap. 3.

Study carefully the technique involved in giving the Gray Silent Reading Test. Practice by giving the test to other students and to the training teacher.

Include in the lessons planned for next week, one dramatization, one question-and-answer recitation lesson, and two study lessons.

Write up the report on the project, following the suggestions given in the program for the thirty-third week.

Was your project a success? Give a specific reason for your answer.

THIRTY-SIXTH WEEK

STUDENT PARTICIPATION IN CLASS-ROOM DUTIES

Give the Gray Silent Reading Test to one class of children. (Students in the lower grades will be given an opportunity to give these tests in a higher grade.)

Make a graph showing the individual and class scores with reference to the standard score.

READING, OBSERVATION, AND REPORT

Each student should make a list of the topics upon which she has written reports in connection with the practice teaching course. Under each topic she should write in brief statements what she considers to be the three most important points which as a teacher she should remember concerning that topic.

OBSERVATION, PARTICIPATION, AND PRACTICE TEACHING FOR A LIBERAL ARTS COLLEGE

STELLA BRADFIELD

La Grange College, Georgia

The tentative proposals of this paper are made as a first step in working out a procedure to meet a purely local situation where initial work is to be done in using a city system for laboratory purposes for a Liberal Arts College.

Before preparing this program the writer studied carefully the earlier work done in this field by Mr. Hugh Stuart and Mr. Hugh Pryor and obtained from them valuable suggestions. This manuscript, however, varies from these earlier proposals in the following points: First, the program continues over a period of four semesters—the Junior and the Senior years of college work—following somewhat, as I understand it, the plan developed first in the Carnegie Foundation *Bulletin*, Number 14. Second, the observation centers around eight major topics, one for each month of observation, with two "floating" topics to be assigned as the occasions arise. Third, there is a sequence in the arrangement of these topics, combining the order of time of the school year with a logical order of observing the factors in the teaching process.

The schools open to the student-teachers of this college will be eight grammar schools (enrollment going as high as seven hundred pupils), and one high school, with four sections to the year through the first three years, and with three sections in the fourth year. These schools are located in different sections of the city and will give contact with the various types of children usually represented in a city system of twenty thousand people.

The work in the first two semesters—the Junior college year—will be devoted: First, to directed observation; and second, to participation in very *simple* activities. The aim of this year is to initiate the student-teacher into the school-room so that she may come to be somewhat at home in the characteristic atmosphere of every-day school life.

The teachers selected for observation will be teachers of outstanding merit—the best the system affords—in their special field of work. Pupils will keep full notes on such topics as school hygiene, school routine, curricula, methods of conducting recitations, tests and measurements, supervised study, discipline, and extra curricular activities. Data will be carefully gathered from all tests made. Notes on all work observed will be used for conferences and weekly class-room discussions.

The partial participation, which is to represent the second step, will be the out-growth of any assistance the student-teacher may be able to give to the room-teacher in any and as many particulars as possible. This may *begin* at any time during the *observation* period. Limited practice teaching—the third stage—may be early available through the needs of small groups of backward children or pupils that have been absent from school. In dealing with these groups, even at the beginning, class-room teaching will be the plan rather than tutoring methods; for abundant experience in tutoring may be had at any time among college students. The student-teacher may also get some practice in supervising study in the class-room and in the library.

In the third semester—at the beginning of the Senior year—the student-teacher will select her special field for practice teaching and, if in high school, one or two subjects of major interest. The plan for this work will of necessity be largely individual, worked out by the student-teacher, the head of the Department of Education in the college, and the class-room or departmental teacher. The student-teacher will observe the regular teacher for several days, get and study the assignments, make her own plans each day, and criticize them in the light of the lesson taught by the room-teacher. After this she will begin actual teaching under careful supervision.

The fourth and last semester in college will endeavor to relate and correlate the information gained in the previous semesters. Theory will be reviewed in the light of personal observation and teaching experience, in order that it may be formulated into a serviceable guide for independent work.

It is the hope of this plan to afford the city system a definite benefit, commensurate, if possible, with the aid it will give to the college work in the following ways: By finally lightening the teaching load of the room-teacher; by collecting materials for class-work; by acting as substitute teachers; by taking part in the play-ground activities, and the like.

PROGRAM FOR OBSERVATION AND PARTICIPATION

First Month.—Observation is to begin early in the year in order that the student-teachers may observe the first steps in such important work as:

1. Seating of children
   - (*a*) Manner of determining seating
   - (*b*) Evidence of attention paid by the teacher to the physical needs of the pupil.
2. Establishing economical routine
   - (*a*) In class
     1. Method of establishing routine. Does the teacher give the same order every time; does she confuse the pupils with varying commands. etc.?
     2. Economy of the routine established. Is the plan of passing pupils in and and out of the room simple and direct? Can materials be passed quickly, etc.?
     3. Continued observation of routine. Do the pupils from the beginning make the work light? Is there a fine room-spirit regarding routine?
   - (*b*) Inter-class
     1. Is management here an end? That is, is it to teach pupils self-control, co-operation, etc.?
     2. Do the classes know how to follow and mark time?
     3. Do problems of discipline arise here?
3. Ventilating and heating
   - (*a*) System used. Do the pupils understand the system? Why should they?
   - (*b*) Condition of air in the room. Hot, stuffy, comfortable?
4. Sanitation and hygiene
   - (*a*) Water supply and drinking facilities
   - (*b*) Sanitary care of building
     1. Is dust eliminated in sweeping?
     2. Are all rooms kept in sanitary condition?
   - (*c*) Lighting of building
   - (*d*) Hygienic habit formation
     1. Cleanliness of pupils
     2. Nutrition, school lunches, etc.
5. Decorations of school-room
   - (*a*) Pictures
     1. Relation to life or work of pupil
     2. Educational value of pictures
   - (*b*) Blackboard work
     1. Kinds of work. Is it the pupils' or teacher's work, or both?

- (*c*) Flowers
  1. Are the pupils given any responsibility concerning them?
- (*d*) General impression of the room
  1. Do the decorations become dust catchers?
  2. Does the room appear littered or orderly in its decoration?
  3. Was the room decorated from the standpoint of the teacher or the pupil?

Second Month.—Student-teachers will, while observing, act when needed, as assistants to the school physician or nurse in:

1. Testing sight, hearing, heart-action, etc.
2. Looking for communicable diseases.
3. Finding defects that should be remedied or removed.
4. Noting percentage of defects found in pupils.
5. Making out reports to be filed and to be sent to the parent.
6. Visiting, if necessary, the homes where reports are sent, to observe:
   - (*a*) Conditions in the home
   - (*b*) Attitude of the parents toward the report sent.

Third Month.—Study of rolls for attendance and punctuality.

1. Study of excuses: follow up work
   - (*a*) Do the excuses show causes to be sickness, bad weather, duties outside of school, pleasure trips, or indifference? Classify and analyze.
2. Study of variation of attendance for different rooms
   - (*a*) Of the same grade
   - (*b*) Of different grades
   - (*c*) Of different schools.
3. Study of the teacher's attitude toward the attendance and punctuality of her room.

Fourth Month.—Study of teachers.

1. Personality
   - (*a*) Is she a healthy, normal person?
   - (*b*) Does she show any signs of "nerves?"
   - (*c*) Is she neatly and appropriately dressed?
   - (*d*) Is her voice well modulated; her manner sympathetic and encouraging?
   - (*e*) Is she well-poised in the school-room—with good address?
   - (*f*) Does she impress you as being a scholarly, cultured woman?

2. Method of instruction
   - (*a*) Does she always keep the recitation in her own hands?
   - (*b*) Does she teach by question and answer? by topics? by projects? Hear an assignment made from the text? Note variety and occasions of her stock of procedures.
   - (*c*) Are the pupils made to feel responsible for a contribution to the lesson?
   - (*d*) Are the pupils encouraged to question each other about information contributed? statements made? or opinions given?
   - (*e*) Does her instruction develop initiative, interest in the subject, power to reason?
   - (*f*) What do you consider her aim in the lesson taught?
3. Method of securing order or discipline
   - (*a*) Devices used to facilitate her work?
   - (*b*) Responsibility felt by the pupils and class for the order of the room?
   - (*c*) Amount of conscious effort spent in securing order in the room? If seemingly no conscious effort is needed, to what do you attribute this?
4. Results obtained
   - (*a*) Do the pupils work independently? take the initiative? reason for themselves? co-operate with each other?

Fifth Month.—Study of pupils in class.

1. General impression made by class as a whole.
2. Attention and interest.
3. Intelligence in questions asked.
4. Information in class answers.
5. Gradation or class average.

Sixth Month.—The assignment and lesson taught.

1. The assignment
   - (*a*) Is there a definite problem given or an aim to be sought? made clear to the class?
   - (*b*) Do all the pupils have the same assignment or are there variations made with different groups? Comment.
2. Results of the assignment, to be observed the second day
   - (*a*) Has the teacher made notes on all work assigned and called for it?
   - (*b*) Did the pupils get all work assigned?

- (*c*) Did they carry their investigations any further than required?

3. The lesson taught
    - (*a*) What form of recitation is used?
        1. Question and answer?
        2. Topical?
        3. Project method?
        4. Socialized recitation?
        5. Methods peculiar to the teacher—*i.e.*, personal factors in her procedure.
4. Questions asked
    - (*a*) Are the questions suggestive or stimulating?
    - (*b*) Do they challenge attention? Why? How?
    - (*c*) Do they produce questions from the class?
    - (*d*) Does the teacher depend entirely on questions to get information from the class? Other means?

Seventh Month.—Supervised study and individual instruction.

1. In class-room
    - (*a*) With a class
      Developing a "work-shop" atmosphere which will keep every pupil busy but free. What technique is available? What can you formulate?
    - (*b*) With individuals
        1. Batavia System,—the student-teacher observes pupils in class and takes initiative in giving aid to develop pupil to normal growth. What elements of technique can you formulate?
2. In library
    - (*a*) Suggesting sources of information
    - (*b*) Helping with atlas and dictionary
    - (*c*) Forming good habits of note-taking. What general principles can you formulate?

Eighth Month.—Standards, tests, and examinations.

1. Preliminary study of tests used
    - (*a*) Intelligence tests
    - (*b*) Subject matter tests
    - (*c*) Individual and group tests.

2. Results of tests
   - (*a*) Grading papers. What principles can you formulate?
   - (*b*) Marking papers. Any principles?
   - (*c*) Comparing with norms.
3. Ranking pupils
   - (*a*) Medians
   - (*b*) Average
   - (*c*) Range
4. Examinations
   - (*a*) Number of questions asked and amount of time given
   - (*b*) Nature of questions asked
     1. Fact questions
     2. Thought or problem questions
     3. Questions calling for application of principles learned
     4. Other types of test: *e.g.*, completion, true—false, etc.
   - (*c*) Atmosphere of room during examination. Do the pupils seem hurried or nervous?

In addition to the systematic outline given, pupils will be assigned as the occasions arise to observe the following:

1. Management of school on a rainy day
   - (*a*) New problems at opening
     1. Care for the physical needs of pupil
     2. Care for the rainy-day paraphernalia
   - (*b*) Management of recess periods
     1. Are plenty of exercise and fresh air provided?
     2. Are the pupils allowed to relax and have a good time?
     3. Are the recess periods shortened and if so, how much?
   - (*c*) Supervision given pupils at dismissal time
     1. As far as possible, does the teacher see that they are protected from the weather?
2. Extra curricular activities
   - (*a*) Special programs in school
     1. Occasions for these special programs
     2. School time devoted to their preparation
     3. Effect on school work
     4. Execution of programs
     5. Estimate of their work (opinion based on several observations).

- (*b*) Athletic events
    1. Educational requirements for participants
    2. Value to school spirit
    3. Interference with regular work
    4. Other dangers?
- (*c*) Social affairs
    1. Do they justify their name?
    2. What proportion of pupils and teachers attend?
    3. Are they managed so as to teach pupils valuable lessons? Opportunities not capitalized?

Pupils will also try to solve some problem in connection with their observation; *e.g.*,

Tardiness in pupils,—to discover its cause and to build up the proper characteristics that will correct this defect in the pupils.

1. Is the fault observed in more than one pupil from the family? Study of home conditions and influence.
2. Can the right standard of punctuality be built up in the pupil, and how?

No program is arranged for the ninth month as students will be busy with their own final work in college classes.

COMMUNICATIONS AND DISCUSSIONS

A REPLY TO HILLYER'S "THE TEACHER AND PARTIZAN ACTIVITY"

December 13, 1921.

To the Editor of "Educational Administration and Supervision."

Sir:—

The article entitled "The Teacher and Partizan Activity" by Mr. Thomas A. Hillyer, in the November issue of your journal, has aroused my interest, both from the viewpoint taken in it and the nature of the arguments therein presented. I am therefore addressing this letter to you in the hope that it may be published to show the "other side" of the question.

I am not arguing the case on the basis of any supposed "academic freedom" or any other abstraction. The question of "academic freedom" is in my opinion irrelevant in this discussion. I am rather trying to proceed from the fact that the teacher is a citizen of the community as well as a servant of it. He is in exactly the same relation to it that the mayor or the chief of police is: a citizen directly employed by the community. He is both a citizen and a servant of that very body whose affairs are usually conducted by means of partizan activity.

As a citizen, he is falling short of being that model which he is assumed to be for the growing future citizens of the community, if he limits his civic activities to those in which he can avoid partizan activity. We are told by the very persons who want us to be models or embodied ideals for our pupils that we must avail ourselves of only a portion of the civic activities: that is, we are told that we must set up before our pupils the practice of an ideal of abstention from what are usually the most vital decisions in the community. Although we are asked to make our pupils civic-minded, we are not to act thoroughly civic-mindedly ourselves!

Moreover, without boasting of the intelligence of our profession, we may safely say that we are probably more advantageously situated to be intelligently civic-minded on all matters than are the members of any other profession. Our professional knowledge requires us to know something of the principles of sociology, economics, preventive medicine, community hygiene, and almost every other phase of applied social-science. Shall we, probably the best-trained profession in these matters, refuse to exert our influence as widely as possible because of the fear of partizanship? I answer unhesitatingly, "No."

Much may be made of several specific cases of harm done by the participation of teachers or educational executives in partizan activities. But in every case thus far cited, the personal bias of the person mentioning it would appear to have much to do with the large size ascribed to the harm presumably done. Is it, after all, better to have a school system loyal personally to its officers and yet disloyal to the best community ethics? Or loyal to its officers and disloyal to the ideals of the best-informed and most honorable part of the community? Is it not better, after all, that the less worthy in ideals among the teachers should be revealed,. and those persons thus given chance to be eliminated?

If our American democracy is to be more than a mere politicians' catchword, is it not necessary that every citizen should be civic-minded and active in civic matters? And how can citizens be civic-active, as matters now exist—and perhaps under any condition, however Utopian—if they try to avoid "partizan activity?"

Let us also consider the teacher as servant of the community. He is employed to do his communal work effectively, and it is his manifest duty towards his employers, the community, to use his influence as widely, as consistently, as thoroughly as possible, to make his work fully effective. Now it will be obvious that the matters with which he is fundamentally concerned in his professional life are more often than not matters in which there is partizanship and in which he must be active as a partizan if at all.

The prestige and respect of the profession in the eyes of the community is not going to be enhanced by sitting on the side lines while the good and evil elements of the community battle for supremacy. Too long we have been treated as mere nobodies in the community life, and accepted both the social and the financial standing of the uneducated man who has become a merchant. Too long we have acquiesced in this status, and too long we have confirmed it by obeying the apostles of "abstention from partizan activity." For example, is there any person so foolish as to believe that if the teachers of New York city had in 1917 and again this year taken definite action towards the defeat of the politicians who were crippling and are crippling the schools of that city, they would not have been a body today in considerably more esteem in that community and in a considerably better economic position?

The doctrine of "abstention from partizan activity" is, after all, not an American doctrine, but is rather one borrowed from monarchical Germany along with much that is bad as well as much that is good, by the admirers of German schools during the past. No man who is really one hundred per cent American, no man who is at heart a believer of democracy, and no man who is solicitous that our education shall achieve its aims fully, can have any truck with this preposterous idea. Those who hold it by so doing write themselves down as fundamentally opposed to the advance of both education and democracy.

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THE TEACHER-TRAINING CONFERENCE IN WEST VIRGINIA

On November 14–15, a Teacher Training Conference was held in Fairmont, West Virginia,. The purpose of this meeting was to study the conditions existing in regard to the number of trained teachers, the degree of training, and the facilities for teacher-training work in West Virginia.

The conference was composed of the presidents and heads of the departments of Education of all the State Normal Schools; representatives of the West Virginia University; Bethany, Salem, and Wesleyan Colleges; the State Department of Education; and most of the normal training high schools.

It was the consensus of opinion of the persons who were present that this was the most important educational meeting in West Virginia within several years. The teacher-training work of the state was reviewed, and it is believed that many progressive movements affecting this work will grow out of this conference.

The fundamental problem before the conference was embodied in the following statistics:

Number of elementary teachers in West Virginia	10,600
Number with less than four-year high-school training	7,200
Number with only elementary school education	4,800

The conference applied itself diligently to the task of solving this problem and recommendations were adopted proposing the following program:

1. An organized effort to encourage teachers to prepare for a higher standard of work.

2. A longer term summer school in all teacher-training institutions for the benefit of teachers in service.

3. Extension schools in different sections of the state that will bring the training schools nearer to the teachers. These schools would be directed by the normal schools or approved by the State Board of Education.

4. An organiztion of the summer-school course of study to meet the needs of teachers.

5. An extension of extension courses and correspondence work by state institutions.

6. A more liberal policy of accrediting experience and irregular training work.

7. A more liberal regulation in the transfer of credits from one institution to another, and a better coördination of all teacher-training work in the state.

While the conference advocated what may be considered a rather liberal standard of accrediting school work, it should be understood that this is for the purpose of meeting the present situation and is not necessarily a permanent policy.

SUMMER SCHOOLS

1. That the responsible educational institutions of the State establish as many branch summer schools as they can profitably direct and adequately supervise.

2. That summer terms should be nine weeks and twelve weeks in length; and that the twelve weeks' term be divided into two periods of six weeks each, if such division is an advantage to the students attending the summer term.

3. That such summer schools should provide opportunity for the earning of one and one-half units in nine weeks, and two units in twelve weeks.

4. That from one-fourth to one-half of this credit should be of professional character. This professional work should include observation of demonstration teaching and may include review of the common branches with emphasis upon methods of teaching.

5. That English and American history and civics, and science or practical arts be recommended as the preferred academic courses for summer schools.

6. That such summer schools be encouraged in particular to introduce instruction in physical education and in public school music and drawing, wherever feasible.

7. That summer schools other than those at the University, State normal schools and standard colleges of the state, should conduct courses on the secondary level only, except as specific authority for more advanced instruction is granted by the State Board of Education.

Correspondence and Extension Work

1. That superintendents, principals and supervisors encourage their rural teachers to take work in the local high school by extension or residence, if teachers are not already high-school graduates.

2. That local school authorities inform their teachers and prospective teachers of the legislative provision whereby the State Department of Education is authorized to conduct examinations on which credit for the first year of high school work may be given. This provision may enable many to meet the requirement this year for the first grade certificate who might otherwise find it difficult to do so. (A bulletin on this subject may be secured from the county superintendent or the State department.)

3. We urge home and independent study under the direction of the local high school or the nearest normal school as a preparation for examination toward credit in the high school or in the normal school.

5. Studies conducted by superintendents, principals and supervisors and other qualified persons with groups of teachers should be credited in the local high schools if the work is of secondary grade. If this work be beyond secondary grade and supervised by the normal school, it should be credited in the normal school.

6. Credit for extension work should be given on the standard normal course on the hour for hour basis.

7. That it should be recommended to the legislature to provide a fund and place it in the hands of the State superintendent of schools for the encouragement of extension work under the supervision of the State university, normal schools and high schools, and for the encouragement and support of summer sessions in the normal-training high schools, and elsewhere it may be found feasible and advisable.

8. That the qualifications of all extension instructors not connected with the teacher-training institutions, be approved by the State Board of Education.

9. The uniform fee set by the State Board of Education for extension work, is approved. (This fee is five dollars for a course running one semester for a two-hour period.)

NORMAL SCHOOLS

1. That the State should not establish any more normal-training high schools at the present time, since the proposed summer sessions in high schools will be of greater service.

2. That dormitory rooms in state institutions be given free to prospective teachers who agree to teach two years in the state.

3. That graduates of standard high schools desiring to take normal-school work be guided into the standard normal course, and that a certificate equivalent to a short course certificate be granted to standard normal juniors at the end of the junior year if the applicant desires to teach.

4. That no person shall be graduated from a standard normal course who has not done one year's work in the school from which he is to be graduated, one-half of which must have been done in residence in that school.

5. That graduates of short courses be required to have done two-thirds of the year's work in the school from which they expect to be graduated, one-half of the work to be done in residence.

6. That a closer articulation of all teacher-training courses should be brought about, and to this end that a committee be appointed to study this problem and make a report to the State Board of Education not later than the first of February.

RECOMMENDATIONS TO THE LEGISLATURE

1. That the legislature increase the summer-school requirement of six weeks to twelve weeks for a temporary first grade certificate issued to graduates of first class high schools.

2. That after 1924, at least one year of high school training be required of applicants for second-grade certificates and that third-grade certificates be discontinued.

3. That the short-course normal certificate be limited to one three-year period, subject to one renewal only.

CREDITS FOR NORMAL-TRAINING WORK

1. That any institution of college rank or grade in the state shall accept credits of institutions approved by the State Board of Education hour for hour.

2. That the State Board of Education require that all teacher-training courses leading to diplomas or degrees in education, be so formulated that no credit for work previously done be lost on account of entrance, group, departmental, or general graduation requirements.

3. That local high schools give credit on their records to mature persons of experience for any work of high school grade on which such persons can give fair evidence by examination or otherwise of possessing adequate knowledge.

4. That high-school graduates, who have had one year beyond high school, regularly enrolled in short normal work, be given credit for the junior year in the standard normal course.

5. That applicants for the short normal diploma should be given credit on first and second grade certificates up to a maximum of four and one-half units on subjects with a grade above 80 per cent; and that one-fourth of a unit be given for each year of successful experience up to a maximum of two units.

6. That sixty-four semester hours, including required professional courses, in addition to any secondary course, be sufficient for graduation from the standard normal course.

7. That one-half unit of secondary school credit be given for two hours weekly for eighteen weeks' extension work.

GENERAL RESOLUTIONS

1. Local superintendents, principals, and supervisors are urged to encourage and assist mature persons of ability and experience in checking up their educational qualifications, and to advise them in regard to qualifying for advanced educational rating.

2. That a state system of rural itinerant teacher assistants, comparable to the plan in operation in Maryland, be put into operation; that these assistants be local teachers of superior attainments and experience; that they be chosen by the local school authorities to improve the teachers, and the teaching in the schools under their charge, and to encourage prospective teachers of ability to secure adequate training preparatory to entering the profession.

3. Teachers who submit their credentials to a state normal school

or other approved school offering normal courses, who already have sufficient and equivalent credits required to complete a normal course, be properly certified by the institution to the State Department of Education, and that the State Department of Education grant such teachers proper certificates.

4. That the teachers' salary be placed on a twelve months' basis.

5. That the normal schools should be empowered to offer the regular four years' college work in teacher-training, and confer degrees in education, and that this arrangement shall be made for the different normal schools when the State Board of Education and the management of the respective schools may deem it advisable for the particular school under consideration.

A MEASURING STICK FOR NORMAL SCHOOL LIBRARIES

A Statement by the Committee on Normal School Libraries National Education Association, December, 1921

A measuring stick is needed for normal school and teachers' college libraries. How large should be the staff of librarians in a normal school of 750 students? How large the library fund? How many books are needed in the library of a teachers' college of 1500 students? How much floor space? What library instruction should be given?

Administrators, boards of regents, faculty committees, and librarians of normal schools and teachers' colleges are asking questions like these. There ought to be an authoritative answer. For until the teacher-training institutions have adequate, satisfying library service, resulting in teachers trained to know the true value and use of libraries in education, all types of education will be deficient and all types of libraries will fail of their highest usefulness.

The following preliminary Statement of Standards for libraries in normal schools and teachers' colleges has therefore been set up by the undersigned Committee on Normal School Libraries of the National Education Association, Library Department. Each member of the committee has given definite permission for the use of his name with this Statement. Comments of any sort are invited. The committee is beginning a survey of normal school and teachers' college libraries, and upon the basis of the facts will prepare a more comprehensive set of standards. An earlier form of the following Statement was presented as the report of the Committee on Normal School Libraries at the Des Moines meeting of the N. E. A., and appears in the 1921 Proceedings of the N. E. A.

Correspondence should be addressed to the chairman of the committee, Mr. W. H. Kerr, Librarian, Kellogg Library, Kansas State Normal School, Emporia, Kansas.

Signed:

William C. Bagley, Teachers College, Columbia University, New York.
Mary J. Booth, Librarian, State Teachers College, Charleston, Illinois.
W. M. Davidson, Superintendent of Schools, Pittsburgh, Pennsylvania.
O. M. Dickerson, President, State Teachers College, Moorhead, Minnesota.
Willis H. Kerr, Librarian, Kansas State Normal School, Emporia, Kansas. *Chairman.*
Martha Caroline Pritchard, Librarian, Detroit Teachers College, Detroit, Michigan.

Mary C. Richardson, Librarian, State Normal School, Geneseo, N. Y.
Alexander C. Roberts, President, State Normal School, Centralia, Washington (1921–1922: Associate in Education, University of Washington, Seattle).

STANDARDS FOR NORMAL SCHOOL AND TEACHERS' COLLEGE LIBRARIES

First statement, issued December, 1921, *as basis for discussion and survey*

(Note: The statement of standards is in two parts: (1) For two-year normal schools; (2) for four-year teachers' colleges. The figures for each are given on a basis of a minimum average winter enrollment of 300 and 500 students, respectively, with increments for each additional 300 or 500 student enrollment or major fraction thereof, respectively. For example, a two-year normal school of 500 students should have a library fund, other than salaries and building maintenance, of $3500 per year,—$2500 for its first 300 students, and $1000 increment for its additional 200 students. Proper allowances should be made for enlarged personnel and facilities to serve large summer school enrollments.)

(A) TWO-YEAR NORMAL SCHOOLS

	For initial enrollment of 300 students			Increment for each additional 300 students		
I. Building and Equipment:						
1. Rooms:	No.	Sq. ft.	Number readers accommodated	No.	Sq. ft.	Readers
(a) Reading and periodical	1	1,875	75	1	1,250	50
(b) Reference	1	500	25	..	500	25
(c) Children's	1	1,000	40	..	500	20
(d) Library classroom	1	600	50 seats			
(e) Cataloging and work-room	1	225	..	1	200	
(f) Office	1	180	..	..		
2. Book Stock:		Vols.			Vols.	
(a) For general circ. and assigned reading		15,000			5,000	
(b) Special reference, incl. bound periodicals		3,000			1,000	
(c) Children's		2,000			1,000	
Total volumes		20,000			7,000	
3. Equipment:						
(a) Stacks or shelving		Statement to be developed				
(b) Illustrative material						
(c) Furniture						
(d) Library apparatus						
II. Library Fund:		Amount per year			Amount per year	
1. At disposal of librarian, not including salaries and building maintenance		$2,500			$1,000	
III. Librarian and Staff:						
1. Qualifications:						
(a) Librarian: A.B. or A.M., plus one year training in approved library school; plus three years successful library or high school teaching experience, preferably both.						
(b) Staff members: A.B., plus one year library school training; plus one year high school teaching experience.						
2. Academic Status.						
(a) Librarian: Full professor, with vote						
(b) Staff: Rank as instructors						
3. Personnel:		Number			Number	
(a) Librarian (and library instructor?)	..		1			
(b) Staff:						
Ref. and Childr. libr'n	1					
Cataloger	1					
Loan Desk, etc	1		..		1	
	–		3			
4. Salaries:						
(a) Librarian: On par with the professor of English.						
(b) Staff: On par with better-paid instructors in English.						
IV. Library Instruction:						
1. Use of the Library, at least 12 lessons *required* of Freshmen, taught by member of library staff.						
2. Children's Literature, *required*, three semester hours credit.						

(*B*) FOUR-YEAR TEACHERS' COLLEGES

	For initial enrollment of 500 students			Increment for each additional 500 students		
I. Building and Equipment:						
1. Library building, with following rooms:	No.	Sq. ft.	Readers accommodated	No.	Sq. ft.	Readers
(*a*) Reading	1	2,500	100	1	1,500	75
(*b*) Reference	1	1,250	50	1	1,250	50
(*c*) Periodical	1	1,000	50	..	400	25
(*d*) Children's	2	1,000	50	..	500	25
(*e*) Library classroom	1	750	60 seats			
(*f*) Cataloging	1	300				
(*g*) Work rooms	2	400				
(*h*) Office	1	300	...	1	200	
2. Book Stock:		Volumes			Volume	
(*a*) For general circ. and assigned reading		20,000			10,000	
(*b*) Special reference, incl. bound periodicals		7,500			2,000	
(*c*) Children's		2,500			1,000	
Total		30,000			13,000	
3. Equipment:						
(*a*) Stacks and shelving	Statement to be developed					
(*b*) Illustrative material						
(*c*) Furniture						
(*d*) Library apparatus						
II. Library Fund:		Amount per year			Amount per year	
1. At disposal of librarian not including salaries and building maintenance		$6,000			$3,000	

III. Librarian and Staff:
1. Qualifications:
(*a*) Librarian: (A.B. or) A.M., plus one or two years training in approved library school, or five years conspicuously successful library experience; plus five years successful high school teaching, or library experience, preferably both.
(*b*) Staff members: A.B., plus one or two years library school training, plus two years high school teaching.
2. Academic Status:
(*a*) Librarian; Full professor, head of a department, with vote.
(*b*) Staff: All to rank at least as instructors, but library department heads with sufficient academic attainments to rank as associate professors.

3. Personnel:	Number		Number
(*a*) Librarian	..	1	
(*b*) Staff:			
Ref. and Library Instr	1		
Cataloger	1		
Children's libr'n	1		
Loan desk	2		
		5	2

4. Salaries:
(*a*) Librarian: On par with professor of English or other important department heads.
(*b*) Staff: On par with better-paid instructors and associate prof's.

IV. Library Instruction:
1. Use of the Library, at least 12 lessons *required* of Freshmen, taught by member of library staff.
2. Children's Literature, *required*, three semester credit.
3. Elective courses, with credit, such as Library organization, Bibliography and Reference work.

PENNSYLVANIA STATE NORMAL SCHOOL CURRICULA

RECOMMENDED BY BOARD OF NORMAL PRINCIPALS MAY 10, 1921

Group I (Kindergarten and Grades 1, 2, 3)

1st Semester	Periods		Credit Hours	
Introduction to teaching	4		3	
English fundamentals	3		3	
English composition	2		2	
Nature study	3		2	
Art	3		1½	
Music	2		1	
Personal and school hygiene	2		2	
Health education	3		1½	
Elective—arithmetic, biology, geology, history	3		3	
	25	25	19	19
2nd Semester				
Psychology and child study	3		3	
Kindergarten theory	2		2	
English composition	2		2	
Oral expression	2		2	
The teaching of primary reading	3		3	
Industrial arts	4		2	
Handwriting	2		1	
Music	2		1	
Health education	3		1½	
	23	23	17½	17½
3rd Semester				
Student-teaching including school efficiency and conferences	15		15	
The teaching of primary subjects	3		3	
Health education	3		1½	
	21	21	19½	19½
4th Semester				
History and principles of education	3		3	
Children's literature and story telling	3		3	
Educational sociology	3		3	
Art education	4		3	
Music	2		1	
Health education	3		1½	
Elective	3		3	
	21	21	17½	17½
		90		73½

Electives of three semester hours' credit may be offered in each semester for capable students.

GROUP II (Grades 4, 5, 6)

1st Semester	PERIODS		CREDIT HOURS	
Introduction to teaching	4		3	
English fundamentals	3		3	
English composition	2		2	
Nature study	3		2	
Art	3		1½	
Music	2		1	
Personal and school hygiene	2		2	
Health education	3		1½	
Elective—arithmetic, biology, geography, history				
	25	25	19	19
2nd Semester				
Psychology and child study	3		3	
Oral expression	2		2	
English composition	2		2	
The teaching of arithmetic	3		3	
The teaching of geography	3		3	
The teaching of history	3		3	
Handwriting	2		1	
Music	2		1	
Health education	3		1½	
	23	23	19½	19½
3rd Semester				
Student-teaching including school efficiency and conferences	15		15	
The teaching of English	3		3	
Health education	3		1½	
	21	21	19½	19½
4th Semester				
History and principles of education	3		3	
Juvenile literature	3		3	
Educational sociology	3		3	
Art education	4		3	
Music	2		1	
Health education	3		1½	
Elective	3		3	
	21		17½	
Total	90		75½	

Electives of three semester hours' credit may be offered in each semester for capable students.

GROUP III (Grades 7, 8, 9)

1st Semester				
Introduction to teaching	4		3	
English fundamentals	3		3	
English composition	2		2	
Nature study	2		2	
Art	3		1½	
Music	2		1	
Personal and school hygiene	2		2	
Health education	3		1½	
Elective—arithmetic, biology, geography, history	3		3	
	25	25	19	19

2nd Semester	Periods		Credit Hours	
Psychology and idolescence	3		3	
English composition	2		2	
Oral expression	2		2	
Health education	3		1½	
Elective—Major group	6		6	
Minor subjects	6		6	
	22	22	20½	20½
3rd Semester				
Student teaching including school efficiency and conference	15		15	
Health education	3		1½	
Elective—Major group	3		3	
	21	21	19½	19½
4th Semester				
History and principles of education	3		3	
Educational sociology	3		3	
Health education	3		1½	
Elective	3		3	
Elective—Major group	6		6	
Minor subject	3		3	
	21	21	19½	19½
		89		78½

Electives of three semester hours' credit may be offered in each semester for capable students.

Major and minor electives shall not include more than three semester hours in the special subjects for which separate curricula are provided in the State normal schools.

GROUP IV (Rural)

1st Semester				
Introduction to teaching	4		3	
English fundamentals	3		3	
English composition	2		2	
Nature study	3		2	
Art	3		1½	
Music	2		1	
Personal and school hygiene	2		2	
Health education	3		1½	
Elective—arithmetic, biology, geography, history	3		3	
	25	25	19	19
2nd Semester				
Psychology and child study	3		3	
English composition	2		2	
Oral expression	2		2	
The teaching of arithmetic	3		3	
The teaching of geography	3		3	
The teaching of history	3		3	
Handwriting	2		1	
Music	2		1	
Health education	3		1½	
	23	23	19½	19½
3rd Semester				
Student teaching including school efficiency and conferences	15		15	
The teaching of reading	3		3	
Health education	3		1½	
	21	21	19½	19½

4th Semester	Periods		Credit Hours	
History and principles of education	3		3	
Children's literature and story telling	3		3	
Agriculture	3		3	
Rural sociology	3		3	
Art education	4		3	
Music	2		1	
Health education	3		1½	
Elective	3		3	
	24	24	20½	20½
Total		93		78½

Electives of three semester hours' credit may be offered in each semester for capable students.

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Volume VIII March, 1922 Number 3

ADMINISTRATIVE PROBLEMS CONNECTED WITH GIFTED CHILDREN

JOHN C. AND J. L. ALMACK

University of Oregon

From every side, school administrators are being admonished not to neglect the superior children. It is maintained that these represent a large element in the whole problem of retardation, and that as a rule they are not given opportunities commensurate with their abilities. In the average school system, it is said, their very existence is ignored.

These charges are not to be taken too literally. Certainly there is some truth in them. Yet it has long been an accepted principle of school organization that students, bright, average, and dull are entitled to progress at what is to them a normal rate, and that each is entitled to realize his own best possibilities. Unquestionably practice has fallen somewhat short of the ideal, and whatever merit there may be in new systems of classification and grading should be considered impartially and with open mind.

A paper solution of the problems involved is impossible; no amount of moralizing and sentimentalizing will improve conditions. Years of experimentation will be required, and errors are likely. Yet a beginning must be made, both theoretically and practically, and a certain amount of preliminary work done before wise school men will introduce marked changes into their schools.

The discussion which follows deals with some of these preliminary questions. The answers and conclusions are based upon a study of superior students in the junior and senior high schools of Eugene, Oregon, during the year 1920–1921. Seven hundred and seventy-six pupils were included in the first test; of these fifty-one were selected as definitely superior.

The first question has to do with method of selection. In the Eugene study, the Army Alpha test was given to the entire group. Ten per cent of each age group that received the highest scores were chosen for further testing, the total being seventy-eight. Of these seven were arbitrarily rejected because they were over twenty years old. The ages represented then ranged from 11 to 20; the scores gained in the test ran from 110 to 195 with a median of 152.

The Otis Group Intelligence Test was next given. Five pupils were rejected because of standings below 135, that mark being taken as the lower limit. The range of scores of the sixty-six cases was from 135 to 211, with a median of 172.

Sixty-three of the sixty-six individuals remaining were given the Stanford Revision of the Binet-Simon test. Eight failed to make a minimum quotient of 110, and seven were dropped because they failed to supply supplementary data asked for. Fifty-one pupils, twenty-three boys and twenty-eight girls, were then studied more intensively, the age-grade distribution being as follows:

Age	Grades						Totals
	7	8	9	10	11	12	
11	2	..	..	..	..	..	2
12	..	1	1	..	..	..	2
13	2	2	2	2	..	..	8
14	..	1	4	3	..	..	8
15	..	..	3	3	3	..	9
16	..	..	..	3	4	2	9
17	..	..	..	..	2	7	9
18	..	..	..	..	..	1	1
19	..	..	..	..	1	1	2
20	..	..	..	1	..	..	1
	—	—	—	—	—	—	—
	4	4	10	12	10	11	51

How much retardation exists in this group? On the basis of chronological age, eight of the boys are retarded for from one to five years; ten are at normal, and five are accelerated one year. Seven girls are retarded from one to five years, ten are at normal, and eleven are accelerated for from one to two years. Thus approximately, thirty per cent of these students are retarded on the chronological age basis.

However, the retardation on the mental-age basis is considerably greater. The mental age exceeds the median chronological age by over two years for each pupil, the range of quotients running from 111 to 132. While these quotients, representing a mental acceleration of two years, at the age of this group, seem very low, yet they are not. In a child four years of age a mental acceleration of two years means an intelligence quotient of 150. If the Alpha scores were translated into intelligence quotients, all of the fifty-one cases given here would be rank very superior in intelligence.

Therefore, in addition to the fifteen who are retarded one to three years, are the sixteen at normal, and all but three of the accelerates. Forty-eight of these pupils are retarded on the mental-age basis for from one to five years. The conclusion seems justified that almost all superior students in high schools are retarded.

The correlation between the Alpha and Otis tests was found to be 0.765 in the case of the boys, and 0.659 in the case of the girls, by the Products-Moments method. For all practical purposes, therefore, a single group test that correlates as high with Army Alpha is sufficient. Probably a good general information test would be preferable to an intelligence test, since it would indicate something of educational and vocational aptitudes, and interests.

Some information was gathered to serve as an index to the interests of the pupils, and as a check on the tests. Teachers rated seventeen as very superior mentally, twenty-six as superior, and eight as average. The eight rated as average are equal to or above the medians in the intelligence scores. Final class grades for the year showed the median standing to be A, an equivalent of 90 to 94 per cent, with no grades below B or 85 to 89 per cent. Parents of forty-three of the children reported they had noticed signs of superiority at an early age: three to five years. In the eight remaining cases, no signs of superiority had been observed.

The students were asked to state their major subject interests, and their vocational aims. The replies were varied. Mathematics leads in the first, with English second. The girls have no pronounced vocational purposes, while the boys have chosen careers that entail college training of a professional or technical character. Their life aims are: physician 2, artist 1, lawyer 3, commerce 5, engineer 6, teacher 2, writer 2, architect 1, farmer 1. It is thus seen that the vocations selected are quite in accord with high intellectual levels.

It is unnecessary for the school administrator to gather as detailed information as has been indicated in this study. The single most reliable group test, a check through reference to teacher opinion or class grades, or a well devised general information test should supply all the information needed to determine intellectual status. The information test should give a good index to vocational and educational abilities, and we note college preparatory courses are most likely indicated.

The more fundamental physical measurements were taken: namely, standing height, sitting height, weight, normal chest circumference, and lung capacity. The vital index was also computed. The findings demonstrate that superior types are not, as often asserted, anemic, poorly developed, and nervous.

Comparisons were made with the Smedley norms, and it was found the group far exceeds the Chicago children in height, weight, and lung capacity. No comparisons were made in respect to vital index, as the studies in which this has been computed are for children considerably younger. An average difference of six cubic centimeters was found in the group favorable to the boys. Medians for the other measurements are:

	Standing Height, Inches	Sitting Height, Inches	Weight	Lung Capacity, Cubic Inches
Boys........................	67.0	34.5	124	224
Girls........................	64.2	33.4	111	160

Parents of forty-three of the children reported them in excellent health, a statement which was borne out by the examiner. Seven were said to be in fair health, while only one was reported to be in poor health. Thirty-nine showed no signs of nervousness, four were said to be nervous, and eight gave signs of being slightly nervous. Thirty-eight are extremely active and fond of play; thirteen are quiet and fond of quiet occupations. Only four cases of mal-nutrition were found, and these were slight. If there is any danger of nervous collapse being brought on through working near the limit of intellectual capacity, it was not shown by the physical examination.

From the administrative point of view alone, these physical measurements are unnecessary. What is needed, however, is a very thorough-going physical and medical examination. Reported findings of a high degree of relationship between mentality and the vital index was not borne out in this investigation, the correlation between Alpha scores and vital indices being negative 0.17.

School progress is conditioned to a marked degree by social and economic conditions in the homes from which the pupils come. No educational program can be carried out successfully without the cooperation and support of parents; social inheritance may be as potent an influence in determining interests and working efficiency as natural endowment, and may serve to explain some elements of superiority. In this study, data has been gathered concerning the parents; race, occupation, social affiliations, formal education, and special interests.

Inferences tending to point out racial superiority are unpopular, and seldom valid. Approximately sixty-five per cent of the population of Eugene is native stock; seventy per cent of the pupils in this group are descendants of the native born. Eighty per cent are of Anglo-Saxon descent, and either one or both the parents of all the students are Anglo-Saxon.

The occupations of the parents are among the best indexes of the home conditions of the subjects. Most of the seventeen occupations enumerated below require a high order of skill and intelligence, and a long period of training. Many of the mothers have been teachers; the next greatest number were students when they were married. Eight of the fathers belong to the professions, twenty-two to the skilled trades, seven are merchants, thirteen are farmers, and one is a common laborer.

Another group of facts throws some light upon the economic status and foresight of the families: namely, the holding of life insurance and membership in fraternal organizations. Thirty-nine of the men carry life insurance, and twenty-nine are affiliated with lodges. Those not so protected, belong to the agricultural group where ownership of land implies present and future economic security. Twelve of the women carry life insurance, and fourteen belong to fraternal societies.

Sixty-two per cent of the parents are church members; forty-two per cent lodge members. As there are some who belong to church who do not belong to lodge, and vice versa, we find that each family is affiliated with either lodge or church, and that each family is through one parent affiliated with the church. Since the social instincts are a prime requisite for success, and indications of superior conduct, it is clear that these children are subjected to excellent home influences.

Reinforcing the preceding, are other data: that, for example, of the chief interests of the parents. A wide range is found, and many of the interests are decidedly intellectual and indicative of a high degree of culture. Literature leads with nineteen, civic pursuits with fourteen, music with twelve, farming with eight, education with five, art with four, history with three, nature with three, and the remainder miscellaneous. In planning special programs and methods of organization for superior types, the school administrator can therefore count upon having cultured, intelligent, and progressive parents with whom to deal.

By an unusually rigorous method of selection it has been shown that about eight per cent of the school population, seventh to twelfth grades inclusive, of the city of Eugene are superior. Where similar industrial, social, and racial conditions prevail we should surely find similar conditions. It is decidedly easier to discover these individuals than it is to make satisfactory provisions for their development. Summarizing we find the distribution of these pupils as follows:

	Junior High School			Senior High School		
Grades	7	8	9	10	11	12
Pupils	4	4	10	12	10	11
Totals		18			33	

The number is obviously too small to permit the organization of separate classes for each grade, or rather resources are so largly drawn upon to meet the actual normal demands of the schol as to render almost impossible special classes for this select group. The question might then be asked whether the senior high school students may not be put into one class; the juniors into another. This is scarcely practicable for two reasons: (1) uneveness in scholastic attainment, and (2) the skipping of material which would be involved. Now if one justifies the skipping of material, does it not imply that content of itself is of little value? If this is the case should not content of real worth be introduced? However, several methods of meeting this problem are already in practice. Some of them are briefly mentioned herewith:

1. The Pueblo Plan—a method of individual instruction.
2. The Batavia Plan—individual instruction supplementing class teaching.
3. The unassigned teacher plan—individual instruction by a special teacher supplementing class teaching.
4. Additional credit plan—extra assignments for individuals, or the completion of maximum courses by groups.
5. Extra-credit plan—work more intensive: that is, credit according to quantity.

6. Completion of regular courses at greater than normal rate.

Partial solutions seem to be about the only ones at present practicable. Those selected will necessarily depend upon local conditions, and in any case will stand in need of modifications. The larger and more prosperous schools can organize special classes, for which there should be special courses of study. Only the most disappointing results can come from the use of the sixth method mentioned above for superior types; the whole emphasis, the whole content should be largely changed. Drill should be at a minimum; the need is education that provides for a variety of intensive and extensive interesting mental contacts at a maximum.

The greatest reliance for future progress in this respect will have to be placed upon experimental schools. It is decidedly inexpedient to attempt the complete reorganization of our schools until we have a basis of wider and more successful experience: an experience which up to date is almost entirely lacking. Certainly some of this experimentation may wisely be undertaken by the public schools, but there are many problems vitally related to far-reaching changes that should be solved with appreciable certainty before we cut adrift entirely from past precedure. Among the questions to be answered are these:

1. Are the tests themselves unquestionably valid?
2. Should we not largely emphasize chronological age, with its concomitants of widened experiences, and emotional tendencies?
3. Might not a grouping wholly on the basis of mental capacity result in classes more widely diverse than we now have?
4. Would such a classification tend to develop caste?
5. Is it in accord with the social principle that the school should be a microcosm of society?
6. Are superior students best developed by a policy of isolation?

Other practical questions enter. The matter of financial support for the necessary additional activities, superior teachers, equipment, courses of study, rooms, attitude of the public—all these and more must be considered. However, the mere appearance of obstacles is no argument against introducing changes into school practice. School administrators should have the courage to "face life as it is and as it changes."

Something should be done, and can be done. Schools are confronted with the obligation of providing teaching material socially and individually worth while, the utilization of natural methods of instruction, and with securing for each pupil the opportunity to progress as rapidly as he is able. In the case of the superior student, this guarantees that he reach at each successive period of his school life, the place in which he can do his best work, with the needed equipment and training. Wisely has it been said that the discovery and fostering of this type of students should be one of the main aims of our educational system.

SUMMARY OF ORGANIZATION AND ADMINISTRATION OF FORTY JUNIOR HIGH SCHOOL SYSTEMS OF KANSAS

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In the spring of 1921, contemplating a detailed investigation of the nature of the junior high school curricula offered in the State of Kansas, a questionnaire was framed covering broadly the points upon which the information was sought. With the questionnaire was sent a request for the printed programs of study of the schools volved. Fifty-five of the eighty-five school systems investigated made returns. Not enough facts relative to the nature of junior high school curricula were received to justify tabulation. Though the main inquiry thus failed, considerable information upon certain topics incidental to it was returned. Though inconclusive, still it may perhaps be useful as indicating tendencies. The fact that it is related to some of the larger points of interest in the junior high school perhaps warrants making the information public.

Classification of Cities, Distribution of School Population, and Median Enrollment

The cities of Kansas are divided into three classes: first, second' and third, having populations, respectively of 15,000 and above; of between 2,000 and 15,000; and below 2,000. Of the cities studied, four belong to the first class; thirty-two, to the second class; and four, to the third class. Obviously, this is a study primarily of the second class cities of Kansas.

In eleven cities, ranging in size from 2,500 to 100,000 having schools organized under the 6–3–3 plan, 2.6 per cent of the population of the city was enrolled in junior high schools. In twenty-five cities ranging in size from 1,600 to 17,000 with schools organized under the 6–2–4 plan, 3.4 per cent of the population of the city was enrolled. Thus stated, these 2 percentages of enrollment are not wholly comparable. They would be more nearly comparable if only the number of pupils in the seventh and eighth grades in schools organized on the 6–3–3 plan were compared with that of the seventh and eighth grades in schools organized on the 6–2–4 plan.

The distribution of the junior high school population for each of the above types of high school organization was as follows: For the 6–3–3 plan, 35.9 per cent of all of the pupils in the eighth high schools involved were enrolled in the seventh grade; 35.5 per cent in the eighth; and 28.4 in the ninth. The distribution of boys in the seventh, eighth, and ninth grades, respectively, was 36.8, 36.3 and 26.9 per cent. The distribution of girls in the corresponding grades was 35.1, 34.9 and 29.8 per cent.

Over against this, for the 6–2–4 plan, 53.2 per cent of all of the pupils in the twenty-one high schools involved, were enrolled in the seventh, and 46.8 in the eighth grade. The distribution of boys in the seventh, and eighth grades was, respectively, 52.2 and 47.8 per cent. The distribution of girls in the seventh and eighth grades was 54.2 and 45.8 per cent respectively.

The distribution of enrollments as here indicated does not necessarily give a complete measure of retention. But indirectly some light is thrown on the number of pupils who are held in high school. It is well known that one of the widely made claims for the different types of reorganized schools is that in such institutions, the elimination of students is noticeably reduced, or that retention is increased. The above facts do not offer a sufficient basis for a final or valid conclusion on this point. A further study of facts and a comparison between the 8–4 plan and between the various other reorganized types of secondary schools, relative to the matter of retention of pupils, should be made.

The median enrollment in the junior high school for the forty school systems is 247.[1] The median enrollment for those schools having the 6–3–3 plan is 379; and, for the schools having the 6–2–4 plan, 132. For the ten junior high school systems having the largest number of pupils, it is 512; and for the ten smallest schools, it is 99.

DATE, PLAN OF ORGANIZATION, AND NAME USED

Out of thirty-seven schools indicating the dates of their organization, two were founded in 1911; one in 1912; two in 1913; five in 1914; one in 1915; three in 1916; five in 1917; seven in 1918; six in 1919; three in 1920; and two in 1921. It will be observed that just one decade is covered by these dates. The median year of organization for these thirty-seven schools is 1917. This study does not include the total number of junior high schools in Kansas. During the years 1920 and 1921 the increase has been even more rapid than the above facts suggest. For there were some schools from which no returns were received, that had been reorganized.[1] The recent tendency for the number of schools to increase is apparent from the fact that as many were organized during the last four years, indicated above, as were organized in the six years preceeding.

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[1] One city school system reported more than one junior high school. These schools were counted as separate schools in finding the median.

As is no doubt, true in other states, a variety of external forms of organization exists. Sixty per cent of the forty schools have the 6–2–4 type of organization; 30 per cent, the 6–3–3 plan; and five per cent, the 6–6 plan. Two other forms reported were 7–1–4, and 6–2½–3½. The present tendency is not necessarily represented by the fact that 60 per cent already have the 6–2–4 plan. The high percentage of this type is partly accounted for by the fact that the seventh and eighth grades previously existed either as partly or fully departmentalized within the 8–4 scheme of administration. It will be noted that with the exception of one school, the division in the external organization occurs at the end of the sixth grade.

Ten schools out of the twelve listed as having the 6–3–3 plan, preferred the name junior high school; one used intermediate school; and one, departmental school. Sixteen schools out of the twenty-four having the 6–2–4 plan, preferred the name junior high school; seven, departmental school; and one, intermediate school. The tendency to use the name junior high school rather than departmental school, even in the instances of the 6–2–4 plan, is evident.

PROMOTION, CREDIT RECORDING, AND CLASSIFICATION OF PUPILS

Promotion by subject is the practice in 60 per cent of the schools; promotion by grade, in 22.5 per cent. A combination of practices was reported for the other institutions. Because of the nature of the questionnaire, it was not possible to determine the exact nature of the methods used in the promotion of subnormal and supernormal pupils. In 72.5 per cent of the schools, however, subnormals are promoted before completing the previous grade and in 80 per cent, supernormals. In order to evaluate these practices, it is necessary to know something further concerning both the nature and frequency of promotion. In 1918, the North Central Association advised that superior pupils who have spent two years in the junior high school, and that over-age pupils, when to their advantage, should be promoted to the senior high school.

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[1] One school located in a city of 15,000 having the 6–3–3 plan, established in 1919, reported too late to be included in this study.

The problem of promotion is intimately related to the nature of credit recording. For example, 75 per cent of the schools record credits by subjects; 17.5 per cent, by units; and 7.5 per cent, apparently, use a combination of methods. In order to evaluate these facts, further information is necessary concerning the exact practice of giving credit for quality, as well as for quantity.

The homogeneous grouping of pupils in both elementary and secondary schools has been widely discussed during the last few years. In the schools here studied, the classification of pupils has been based in part upon the use of intelligence tests. This practice has a bearing upon the problem of promotion, as well as upon that of credit recording. For instance, 35 per cent of the schools use intelligence tests in classifying pupils; and 27 per cent use intelligence tests combined with teachers' ratings and judgments, or estimates. How significant the classification of junior high school pupils by means of intelligence tests is can be determined by follow-up work, and by further analyses of related facts during the next few years.

TEACHING PERIODS PER DAY, LENGTH OF RECITATION, AND PLAN OF SUPERVISED STUDY

Only the replies relative to academic teachers of high school subjects are here taken into account because of the confusion of the reports returned concerning the practices of vocational teachers. This confusion was partly due to the lack of clearness of the questionnaire. About 27 per cent of the academic teachers teach more than five periods per day. A little more than 60 per cent teach five periods. Apparently the majority of these schools are meeting the standard in this respect according to the North Central Association. One should also know, however, the length of the corresponding periods taught by each of these instructors in the different schools in order to make any comparisons between schools.

Twelve schools have a recitation period of sixty minutes in length; four, of more than sixty minutes; ten, a forty-minute period; ten, forty-five to fifty-five; and three, a thirty-minute period. A little over half of the schools, therefore, have a period of fifty minutes in length or longer.

So-called "supervised study" has been widely introduced into schools throughout the country. Thirty-five of the forty schools have some sort of supervised study plan. Seventeen schools reported their time division between recitation and study period as half and half; fourteen, as "part and part." Four schools listed the divisions definitely as follows: 30–40; 40–30; 25–15; 35–30, respectively. Perhaps these should have been included under the caption "part and part." The summarized facts here given are not wholly enlightening. They do indicate that supervised study, in some respects, is in a rather chaotic condition. From the facts gathered there is no way of knowing the real nature of the supervised study done in the different school systems. There is a growing conviction that we have not lived up to all of the claims made in the name of supervised study, and that there is great need for a clearer statement of the technique involved in the different school subjects. Perhaps it would have been more valuable to analyze examples of the *practice* of supervised study in a limited number of representative schools rather than to consider the group as a whole.

EXPERIENCE, TRAINING, AND SALARY OF TEACHERS

Out of a total of 352 teachers employed, the number of inexperienced persons was 22. These persons represented nine different school systems, six being the highest number of inexperienced teachers employed in any single school system. Four other systems employed one each. In all, 212 teachers had had previous experience in the grades below the junior high school and 118 in the grades above. What proportion of these teachers had previously taught in the seventh or eighth grades could not be determined from the replies, nor could the exact amount of experience, in the grades above and below. It was equally impossible to evaluate the teachers' success in their previous positions.

Over 45 per cent of the academic teachers, and over 37 per cent of the vocational teachers possess degrees. Unfortunately the blank merely called for the number of persons having B.A. degrees. Had the blank read B.A. degree or equivalent, the percentage would probably have been a little higher.

Closely connected with the training and qualifications of teachers, is the matter of salary. In 70 per cent of the schools, junior high school teachers are not paid as high salaries as are senior high school teachers. Four of the schools made no reply on this point. It is pertinent to raise the question as to whether the practice of paying junior high school teachers less than is paid to those in the senior high school, will affect ultimately the efficiency of junior high school teaching. Perhaps it is usually true that senior high school teachers do prepare more extensively, especially on the side of academic subject matter, than do the junior teachers. It is perhaps coming to be assumed also that senior high school teachers should have a knowledge of methodolgy equal at least to that of junior teachers. Whether in the junior high school teachers who in respect not only to years of successful public school experience, but also in respect to the amount of professional andacademic training, which they possess are the equals of the senior high school teachers, should receive a lower salary is clearly open to debate. A strong case at least for equivalence of pay under such conditions is made out by *Bulletin* No. 14 of the Carnegie Foundation.

Housing, Control or Authority

With a single exception, there is not more than one junior high school located in each city of Kansas. But even under as simple conditions as these, the housing of the junior high school is not always an easy problem to solve. Only 35 per cent report that junior high schools are housed separately. In a number of instances, modern buildings have been constructed; but 25 per cent are housed with the senior high school; and 25 per cent with the grades below. All sorts and types of room and floor segregations are represented.

In spite of the fact that the returns showed that only 35 per cent of the junior high schools were separately housed, however, it was reported that 60 per cent of the junior high schools have a separate principal; and that 35 per cent did not have a separate principal; three schools did not reply. The report made in 1918 of the 293 junior high schools of the North Central Association, showed that 60 per cent of these schools had a separate principal.

As a final item in this summary we may suggest that there is apparently need for a much clearer statement of the functions of the junior high school principal than is now available.

THE PREPARATION OF HIGH SCHOOL TEACHERS IN THE STATE OF PENNSYLVANIA

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A glance at the number of high schools in the State of Pennsylvania, the ever increasing pupil enrollment, the wealth and diversity of the present program of studies, the changed emphasis upon subject-matter, the new methods of presentation, and the rather definite aims, goals, and objectives of secondary education makes the training of high school teachers more important than ever. None but the highest type of man or woman, with a preparation both specific and general, should be entrusted with the educational guidance of the future leaders of our nation between the years of fourteen and eighteen.

In order to give some idea of the immensity of the problem in Pennsylvania, the following table was prepared. It shows the total number of high schools, together with enrollment, for the year ending, July 1, 1919.

High Schools	Number	Enrollment
City	56	59,878
Non-City	887	68,842
Vocational	25	1,550
Total	968	130,270

For the manning of these schools, the State has required a host of about 5800 teachers, with an annual turnover of 500 to 600. In the election of these high school teachers the various local boards have had to proceed without counsel or guidance, for our Commonwealth has practiced but little control over the preparation, selection, or nomination of high school teachers. The situation throughout the State is, in consequence, far from satisfactory. In many counties, a large majority of the high school teachers, 894 out of 1301, as a study of the high schools of 14 counties revealed, are only normal school graduates. And for all the non-city high schools there were during the year 1919–20, besides teachers with certificates of a different type, only 1895 with college diplomas to 1224 with normal-school training. The following table, giving the number of teachers for the various classes of high schools, together with ratios, reveals the real condition of the teaching force quite clearly:

Non-city High School Teachers

High School	College	Normal	Ratio
I Class	1,580	560	14:5 about 3:1
II Class	217	408	10:19 about 1:2
III Class	127	306	5:12 about 1:2.4
Total	1,924	1,274	3:2 ....3:2

There is, as the above figures show, a larger proportion of normal-school graduates than there should be, for our normal schools are not equipped with facilities to warrant their training high school teachers. Their teaching has been concerned, for the most part, with subject-matter of the high school grade. But even if they had professors and equipment competent and adequate enough for doing four years' college work, they would not be able to meet the requirements. There are too few of them. In fact, they cannot at present supply teachers in sufficient numbers to man even the lower grades. Slight study, only, reveals that our thirteen normal schools, located as they are, will always be taxed to the utmost, to furnish each year 5500 new elementary school teachers, the approximate annual turnover for the first eight grades.

Nor are the college graduates in the field of teaching what modern theories and practices demand, either. They have generally spent, it is true, considerable time upon the acquisition of the so-called academic subject-matter; but their professional training, as the following chart of the professional courses given by the various colleges shows, has usually been lamentably deficient and inadequate.

Even according to the letter, it will be noted, the colleges are not giving a sufficient number of semester hours to fulfill the minimum requirement of professional work, set by the Department of Public Instruction. As the departments of other states, our Department has insisted upon two hundred hours, about twelve semester hours, of pedagogical subjects as a prerequisite of the College Provisional Certificate. At the nineteen colleges under consideration the bulk of this work, however, has been made up of logic, general psychology, and ethics, which, even with the broadest interpretation of the term, should really not be considered professional courses at all.

	Albright	Allegheny	Bryn Mawr	Bucknell	Dickinson	Frank. & Marsh.	Grove City	Juniata	Lafayette	Lebanon Valley	Lehigh	Muhlenberg	Pennsylvania	Penn. State	Susquehanna	Swarthmore	Ursinus	Wash. & Jeff.	Wilson
Hist. of Ed.	1	3	4	3	4	4	6	6	3	4	3	4	6	6	2	4	6	2	2
Phil. of Ed.	1	..	..	3	..	2	2	3	..	..	..	..	3	..	2				
Prins. of Ed.	2	..	..	3	4	2	5	..	..	..	..	4	..	10	..	4	4		
Ed. Psych.	..	3	5	3	..	..	..	3	3	..	..	4	2	3	..	2	6		
Logic	2	3	2	3	2	2	3	3	3	..	..	2	2	3	8	..	3	2	2
Gen. Psych.	2	3	4	4	6	2	6	3	3	4	6	2	2	6	4	3	3	3	4
Ethics	3	3	3	3	6	2	3	3	3	4	..	2	2	3	3	2	..	2	2
Second. Ed.	..	3	..	3	..	..	2	..	..	4	6	4	3	3	..	..	4		
J. H. S.	..	..	..	..	..	2													
Meth.-Man.	1	..	..	..	..	2	2	3	3	2	..	..	..	6	..	2	4	..	3
Sup.-Adm.	1	..	..	..	..	..	2	3	3	..	..	4	4	3					
Study of Ed.	..	..	..	..	..	2													
Tests-Meas.	..	..	..	..	..	..	..	..	..	..	2	..	..	6	..	..	3		
Voc. Psych.	..	..	..	..	..	..	..	..	3										
Exc. Child	..	..	..	..	..	..	2												
Ed. Soc.	..	..	..	..	..	..	4	..	..	..	..	..	..	3					
Total	13	18	18	25	22	20	37	27	24	18	17	26	24	52	19	17	33	9	13

What little work is being done in special methods and in observation and practice teaching, did not receive recognition in the above chart.

The following quotation, taken bodily from one of the college catalogs, shows how far removed from the ideal, the liberal college professor's conception of the professional training of the teachers of the State is: "Teachers Training. Two hours. Throughout the year. The aim of this course is to give in a concise and convenient form, a fairly comprehensive elementary course for teachers or those contemplating teaching. The course is in two parts. The theme of the first volume is the Bible. In the second volume the following subjects are discussed: The Pupil; The Teacher; The School. The complete course is helpful not only to teachers in the Bible School, but also to the public school teachers. Text: Barclay's "The Bible."

The courses offered in Education, in themselves, are bad enough; but what makes matters even worse is the fact that the professors in charge of the same have but very rarely gone through any specific preparation for this part of their activity. In many instances, in fact, it forms work foisted upon them as additional labor. And so the professor of general psychology and the history of philosophy, of Hebrew, Latin, and English; of biblical literature or the Greek Testament, or even of physics, teaches, in addition to his specialty, the history or psychology of education, and gives a course on secondary education without ever having been, perhaps, within the walls of a modern high school, except as casual visitor or commencement orator.

So far, the State Department has required no practice-teaching as a prerequisite of the high school teaching certificate. Consequently, there is no attempt even, except on the part of only one or two colleges, to offer prospective teachers any opportunity for practice-teaching or observation. And under the present organization of the colleges, it would, perhaps, be unwise to institute the same, anyway. The diminutive size of many college communities, the changing character of the tenure of office of public school officials, and the immaturity of the large majority of college students, would make it futile in the judgment of the author to try to establish lasting realtions in this particular between the public school and the private denominational colleges. The experience of our normal schools stands out as a shining example of the difficulty, yes, futility, of the undertaking. And other states have had the same experience.

A change seems imperative. If high school teaching is to be worth the pupil's while, the State must pay more attention to the training of its prospective high school teachers. It would do well to take over and reorganize the Schools of Education at Pittsburgh and Philadelphia. They should be turned into State Teachers' Colleges, one of whose chief objectives would be the training of teachers for the high schools of the commonwealth. And a practice school of secondary grade should be established in connection with each, in order to provide the teachers in training facilities for observation and practice-teaching. These high schools should be run during twelve months of the year. Finally, the work of the teacher in-the-making, at these teachers' colleges and practice schools, during the twelve calendar months, should be so organized as to admit, without prejudice and loss, students from accredited liberal colleges, with 120 to 125 semester hours of collegiate study devoted to their chosen field.

The realization that education is a state function has become quite widespread, and numerous states have accordingly taken active steps to control the various educational agencies essential to the welfare of their citizens more and more completely. As a step in this direction and as an attempt to amend the inadequacy of the system now in vogue, one may consider the establishing of various teachers' colleges or schools of education; such as Minnesota, Indiana, Colorado, and Illinois; all established since the beginning of the 20th Century. The same motives, in view of conditions, should impel Pennsylvania to do the same. Being owned by the State, teachers' colleges can be used exclusively and expressly for the training of public school teachers, which has not been true of private schools and colleges; for at these, teacher training has often been quite secondary unless it was a good business proposition to make it the prime activity of the institution.

For the effective training of over five hundred new high school teachers each year, the State of Pennsylvania will need two separate training schools. And to provide adequate practice facilities, they should be placed at populous centers. The cities of Pittsburgh and Philadelphia appear ideal. They already have two well established schools of education, and the school population of high school grade in each is large enough to make the establishment of a high school with an enrollment of 1500 in connection with each teachers' college an easy matter. Nowhere in Pennsylvania, if we grant the validity of the following quotations as to the value of abundant practice teaching, could one find such weighty factors, schools of education already well established and practice material in great abundance, in favor of the proposed state teachers' colleges:

"Many of the qualities that make for efficiency in high school teaching can be adequately developed in the college only by providing properly supervised practice teaching in schools of secondary grade. It is only through work of this sort that initial efficiency in instruction and discipline can be markedly improved."—*Proc.* N. E. A., 1912, p. 690.

And for responsible room teaching such as we contemplate, speaks the 18*th Year Book*, p. 35: "Practice teaching as such is inadequate and too limited for the prospective worker in secondary schools. The teaching of a brief number of lessons under rigid inspection fails to develop personal insight and initiative. The student needs critical experience in self-judging and self-direction."

Under state control these proposed teachers' colleges should then be so organized as to require for their degree and the high school teaching certificate a year of twelve calendar months in residence in addition to 120 or 125 semester hours of collegiate study. Such training would, of course, require somewhat more time than young men and women are today spending upon their equipment for teaching. But the tendency everywhere is in the direction of more and better preparation. And it is just that it should be so; for teaching will never attain the dignity of a profession, such as we all hope that it may, until the individual teachers devote more time to training. The physician has to have at least seven years in addition to his high school course, before he can even begin to practice. And about the same is true of lawyers. If we judge from the following quotations, all of which point to a broad, liberal education; many, in fact, to a year of graduate study, we may say that schoolmen, too, are awake to this need:

"The best schools of law and medicine require six, seven, or eight years of college and university study above the high school course, and the tendency at present is toward an increase rather than a diminution in the work. The teacher must keep up with the highest and best demands of the times, or be relegated to a position of constantly diminishing worth."—Brown, J. S.: *Proc.* N. E. A., 1907, p. 554.

"Dentistry, law, engineering, nursing, journalism, every profession that is a profession requires many more years of training than are required for teaching."—Coffman.: *Proc.* N. E. A., 1917, p. 64.

"If the work of the secondary school is to be developed in relation to our modern needs, we shall have to provide more adequate training for teachers. If the American people are wise they will make it possible for a man or woman to find a career in teaching in our secondary schools comparable to that to be found in medicine, in law, or in engineering."—Strayer.: *Proc.* N. E. A., 1918, p. 188.

"Public school leaders and a considerable percentage of teachers should have five, six, or seven years of academic and professional training beyond high school graduation. Public school service will never be generally recognized as a profession of unquestioned dignity and position until we require of teachers preparation equivalent to that now required in the professions of law and medicine."—Waldo: *Proc.* N. E. A., 1907, p. 11.

The following quotations point quite emphatically to a year of graduate study:

"No provision is made for the study by the prospective teacher of his profession. As this study is just as fundamental as the teacher's study of "academic" subjects, it is clear that under-graduate study for the teacher is not enough. The essential minimum of professional study, without which a young high school teacher should never be recognized as such, is accordingly assigned to a year of graduate study."—Hanus: *Proc.* N. E. A., 1907, p. 567.

"The secondary teacher ought to complete the four years course in a secondary school, four years in a good college, and then take a year of professional training either in a normal school or school of education."—Brown, J. S.: *Proc.* N. E. A., 1907, p. 553.

"Professional training should be added to, not substituted for, the academic education in college or university. Indeed, it is assuming a good deal to suppose that even graduation from college will give a mastery of any subject."—"Including the professional subjects in the list of subjects required for a degree can be accepted only as a temporary arrangement, pending the time when higher standards may be established. To include professional training within the scope of the college course means the elimination of some elements of academic study and the reduction of thorough academic education in proportion to the amount of elimination. Ultimately, this nation cannot afford to accept anything less than a full academic education of at least four years, supplemented by professional training in addition."—Gosling.: 18*th Year Book*, p. 175.

"Every prospective high school teacher should be encouraged to spend at least one post-graduate year in some university school of education, engaged in professional preparation for teaching."—"A year of graduate work divided between academic and professional subjects is desirable."—Rep. Com. Seventeen.: *Proc.* N. E. A., 1907, p. 533.

The State of California has already had a requirement of one year of graduate study since January 1, 1919, according to which: "Each candidate shall submit evidence that in addition to the academic and professional courses required for the bachelor's degree, he has completed at least one year of graduate study, doing full regular work, though not necessarily a candidate for a degree."

And the number of semester hours of preparation in higher institutions, that the various superintendents of the country desire for teachers of high school subjects, makes more than the ordinary college course quite imperative, above all if one keeps in mind the broad training, the necessity of specializing at least in two majors, and the professional courses demanded of all prospective high school teachers. The average student, as the following figures, taken from the superintendents' reports as given in the 18*th Year Book*, p. 232, lead one to believe, cannot cover the work within a period of only four years.

DESIRED SEMESTER HOURS OF PREPARATION IN HIGHER INSTITUTIONS

	Engl.	Latin	Mod. Lang.	Math.	Hist.	Bot.	Chem.	Phys.
Median no. hrs.......	32.1	14.9	31.5	22.5	37.5	21.2	25.6	18.9

Without any practice-teaching or observation whatsoever, devoting, for instance, 32 semester hours to English, 38 to history, and 12 to pedagogical subjects, the student would have but 38 semester hours to spend on related subjects. Most colleges, however, require from 50 to 60 hours for such studies.

It would be quite easy to quote many more expressions as to the importance and necessity of thorough preparation on the part of high school teachers, but the following two will suffice:

"It is, however, of the utmost importance that the teacher should have a broad and generous conception of his calling; that he should comprehend the relation of things; that he should have large objectives that extend his vision beyond the immediate work that he is doing, that give him an insight into its significance, and a means of evaluating its details in terms of something more comprehensive and important. This broad point of view is particularly necessary for the prospective high school teacher. For the elementary teacher this broader outlook may not be so essential. Instructors in the lower grades are held down to very definite courses of study, to be taught according to carefully prescribed methods with definitely stated and measurable results. The high school teacher, however, has large autonomy in many instances, and unless he has a stock of free ideas to aid him, his aims in teaching, as well as his methods, are likely to be largely of the trial-and-error variety."—Colvin: 18*th Year Book*, p. 191.

"The teacher specialist should be guided by the general rule that he ought to study his branch until he can survey it as a whole, keep in mind at one time its parts, decide what may be omitted without detriment, and have confidence in his own opinion on any points raised in connection with his subject. Without such a mastery it ought not to be possible for a high school teacher to get a certificate."—Rep. Com. Seventeen: *Proc.* N. E. A. 1907, p. 531.

In reorganizing the schools of education at Pittsburgh and Philadelphia, it would not be necessary, of course, to make the bachelor's degree a prerequisite of admission to the final period of twelve calendar months. The requirement of admission should be from 120 to 125 semester hours of collegiate work of high standard. Some arrangement of cooperation might then be made between the various colleges and the new state teachers colleges, according to which the student would not receive his degree from the liberal college until he had finished his work at the professional school, at which time, however, he might be granted two degrees at the same time, the one from his original college, the other from the teachers college. The University of Pennsylvania, in fact, already has a plan by means of which a student may take two degrees at one time. And some of the other colleges have a similar practice in the granting of the Master's degree.

Besides the testimony quoted above, there are many arguments in favor of such a year of intensive training, subsequent to the acquisition of the academic subject-matter at the various colleges of the State. It would certainly give the student an opportunity to reorganize and reshape his acquired knowledge with teaching as a definite goal. And that is no small item. "Every high school teacher ought to have a definite course in recasting his subject from the pupil's point of view."—"This point of working over our store of knowledge so that it can be intelligently communicated to the pupil and assimilated by him is as important as getting that knowledge in the first place."—"In general, the greater the academic accomplishment of the secondary school teacher, the better his teaching will be; provided this academic study is so tempered and modified by professional study as to enable him to select from his greater store of knowledge those items of most use in the development of his pupils."—Rep. Com. Seventeen: *Proc.* N. E. A. 1907, p. 531, p. 548.

Such a year would, moreover, help sift and eliminate the weak, inefficient, and undesirable candidates. Today the sifting and selecting is done at the expense of the smaller schools, for the large schools will not take teachers until they have had two or three years' experience. The proposed plan would tend in the direction of what is expressed, *Proc.* N. E. A. 1907, p. 614: "We are greatly in need of legislation in all states which will permit only the absolutely well-trained to enter the ranks."

It would also be easy to develop professional ideals and interests, for the attention of the students could be directed to the vocational side of their preparation. This point is readily conceded if schools of engineering, law, medicine, and the practical arts, where there is a motive back of all the work, are visited. And the students would be taught and directed by those whose "life work is the training of teachers and the promotion of the interests of the profession of education." From two schools, such as these, well established and organized, should issue a unifying, centralizing, standardizing, and steadying influence over the entire school system of the State.

The effect, moreover, of greater and more thorough preparation and training upon the world in general would be excellent, too. Teachers would rise in the esteem of the public, for it would soon become evident that their work required serious and particular preparation. The profession would cease being a mere stepping-stone as soon as the elect only found recognition.

The reaction upon the smaller colleges would be very salutary, too. They would strive to be on the accredited list. The teachers colleges could have such a list, not fixed and unchanging in makeup but always dependent upon the manner in which the particular college were meeting the State requirements, both as to quantity and quality of work done. With such a goal before them, they would be keyed up to the highest pitch. They would be anxious to have their students admitted and do well. On account of their merit and services in the past, the State can, indeed, well afford to do all in its power to retain them at their best. Our State is much better because of their presence. Of this influence there are many evidences.

The geographic distribution, in the first place, of the various colleges of the State of Pennsylvania is a powerful factor in the spreading of education among all classes of people. A glance at the following charts of the numerical distribution of the students of Bucknell, Lafayette, Lehigh, Pennsylvania State, and Washington and Jefferson colleges, should convince the most skeptical of the validity of such a claim. The nearby states or counties always send more young men and women to the college that lies in close proximity than those lying farther removed. In fact, many men and women are today college graduates because their parents lived near some college or university. In the field of education, these colleges scattered over the State serve as excellent recruiting stations. Any arrangement or organization that might encourage them in their endeavor should be welcomed.

The following chart shows to what large extent the students of our colleges come from this State, how the neighboring states of New York and New Jersey are next in order, and what a small proportion is drawn from other more distant states. And the same principle applies to the numerical distribution of the students over the various counties. The county in which the institution is located, is most deeply affected.

College	Total	Penna.	New Jersey	New York	All others
Bucknell........	865	644	94	24	103
Lafayette......	712	413	167	49	83
Lehigh.........	1,136	620	159	93	264

The Commonwealth of Pennsylvania should do nothing to prevent its using the equipment of the colleges within its borders for the preliminary training of its high school teachers. Without any expense to the State it has at its disposal, today, many exceedingly well trained and efficient teachers and excellent housing, laboratory, and library facilities, amassed and put at the public's service through private initiative.

Moreover, the final combined product of the widely distributed colleges and the centralized teachers colleges would be more representative of the State as a whole, socially, culturally economically, and educationally. Not all would have passed through one and the same fixed and narrow training process.

And it would prove a great advantage to prospective high school teachers, about to train some boys and girls for college, to know what college life and training actually mean. Even today there are many that show themselves all too ignorant of what is really happening within the college walls.

In favor of allowing the various colleges to give the prospective high school teachers their academic training would be the fact, furthermore, that the final decision to teach could then be postponed for a year or two without marked harm or loss to the student. When leaving high school, many young men and women do not know what line of work they should follow. For such, the gates to the teaching profession should be left open as long as possible. And, perhaps, through this very process, some more men might be recruited. At the New York State College for Teachers at Albany, conditions in this particular are not very good. The proportion there is one boy to seven girls. Again, why break with all traditions and suppress all sentiment? Today, many sons and daughters show a preference for the alma mater of their mothers and fathers. Why not let them attend the college of their choosing, and then finish their training at the centralized teachers' college if they so elect?

Finally, the following testimony of the Commissioner of Education of New York State, quoted in *Proc.* N. E. A. 1907, p. 613, speaks quite emphatically in favor of college-bred high school teachers: "It was thought, too, at the time when the New York State Normal College was chartered that the graduates from the classical courses offered at the Normal College would find positions in the high schools, but the demand for teachers of more liberal culture has increased so much since 1890, that probably not more than one-half the graduates have found employment in the secondary schools of the State. Consequently, the Normal College has not been able to meet the expectations or demands of the State for college-bred teachers who have a proper knowledge of the science of education and the principles of pedagogy. The belief of educators, philosophers, and educated people alike has crystallized into the conviction that teachers who are to be employed in the high schools should be college graduates with a thorough knowledge of the general principles of education."

Having given various reasons why the State of Pennsylvania should turn the Schools of Education at Pittsburgh and Philadelphia into State Teachers Colleges, I should like to outline, by way of illustration, a course of study for young men and women who intend to prepare themselves to teach English and history. The curricula that follow were arranged for preparation in two majors because experience has shown that candidates for high school teaching should equip themselves for at least that many different subjects. In fact, some schoolmen recommend preparation even in two majors and one minor.

(*A*) While a high school pupil in the State of Pennsylvania, the future teacher of history and English, in order to assure thorough preparation for college, should study Latin, English, and the social studies during each of the four years. To science and mathematics two years each should be devoted. In addition to this, considerable time should be allotted to health, music, and drawing. Since Latin would be pursued merely as a means to an end, the better understanding of English, it should be taught with that in view.

HIGH SCHOOL COURSE FOR ADMISSION TO COLLEGE

(Figures indicate number of 40 or 45 minute periods per week)

I Year. English 5; Civics 5; General Science 5; Latin 5; Physical Training —2; Drawing —2; Music —3.

II Year. English 5; European Hist. 5; Algebra 5; Latin 5; Physical Training −2; Drawing −2; Music −3.
III Year. English 5; European Hist. 2½; Am. Hist. 2½; P. Geom. 5; Latin 5; Physical Training −2; Drawing −2; Music −3.
IV Year. English 5; Am. Hist. 2½; Problems of Democracy 2½; Physics 5; Latin 5; Physical Training −2; Drawing −2; Music −3.
Total, 94 Credit Periods.

(*B*) The work of the college course should be professionalized much more completely than it is today. By selecting and arranging their courses in such a way as to equip their students for efficient high school teaching, college professors would greatly enhance the value of their services to the State without in the least lowering or degrading the standard of their teaching. Curricula should be so planned as to contain only what would tend to make the recipient of the instruction more efficient in teaching his chosen subjects. But few college professors throughout the State have as their aim in teaching the training of teachers. And yet many of their students have teaching as their chief objective.

The outline that follows, largely based on the Carnegie Curricula of 1917, is divided into four parts: (1) Subjects to be taken by all future teachers; (2) Studies to be pursued by all prospective teachers of history and English; (3) Courses especially adapted to the teaching of high school English; (4) Work expressly for future teachers of high school history. The latter two divisions were again subdivided into major and related subjects.

The names of the various courses below coincide with those announced in the catalogs of about all the colleges; but the content of the same would be quite different. According to the demands of a professionalized course, there would be but little time, for instance, for the consideration of the quartos and folios in a course on Shakespeare. And the minor and out-of-the-way works and authors would have to give way to works and movements of significance and bearing upon efficient high school teaching. Each course, yes, each part, would have to be taught in such a way as to throw light upon the whole. And one is safe in saying that the recipient of such teaching would issue forth from his Alma Mater with as much culture, mental training, and liberal education as the college graduates of today. They would be trained, besides, to do an efficient piece of work.

COLLEGE COURSE FOR PROSPECTIVE ENGLISH AND HISTORY TEACHERS

(Figures indicate the number of clock hours per week)

1. *Identical for all prospective high school teachers.*

I Year

English.—Grammar, composition (oral and written), and spelling, taught intensively and aiming primarily to insure an adequate equipment in English for every prospective teacher. 3

Chemistry.—Designed primarily as a basis for the courses in biology, physiology, and hygiene. 3

Occupations and Industries.—To give every teacher some information about the various types of human occupations, to insure against a narrow social and occupational outlook. 2

Physical Training.—Physical examination of all students, followed by corrective exercises where needed. All students should have practice in games and sports under supervision, and with especial emphasis upon the playground activities and athletic contests that are suited to pupils in the secondary school. −2 9

II Year

Biology.—Designed primarily as a basis for the courses in psychology, sociology, hygiene, etc. 3

Physiology.—To run parallel with and extend the course in biology above. 3

Physical Training and Games. −2 7

III Year

General Psychology.—An elementary course combining the important topics of both general and educational psychology, and forming the basis of the specific courses in educational theory and practice. The chief emphasis should be upon: (*a*) instinctive tendencies; (*b*) habit-formation; (*c*) memory, association, and economy of learning; (*d*) the affective life; and (*e*) the thought-processes. 4

Physical Training and Games. −2 5

IV Year

Genetic Psychology.—The psychology of infancy, childhood, and adolescence, with the emphasis upon adolescence. 3

Physical Training and Games.	—2	4
2. *Identical for prospective teachers of English and History.*		
I Year		
Library Technique and Science.—Instruction in the method of classifying and cataloguing books, and practice in the use of reference books, readers' guides, etc.	2	
French.—As a basis for the study of the English language and literature.	3	
II Year		
Art.—A special course embodying the elements of composition and design, but aiming primarily at appreciation rather than at a mastery of technique.	—2	
French.	6	7
III Year		
German.—As a basis for the study of the English language and literature.	6	6
IV Year		
History of Philosophy.—Designed to bring prospective teachers in contact with explanations of the world system.	4	
History of Science.—The development of the principal concepts of the physical and biological sciences with particular reference to the influence of scientific discovery upon human progress.	2	
German.	3	9
3. *English Major with related subjects.*		
I Year		
English Literature.—A systematic survey of English literature with the emphasis upon materials suitable for high school pupils.	3	
Reading and Voice.—To insure a good teaching voice and effective address with facility and ease in oral expression.	2	
Argumentation and Debate.—To prepare the student to supervise literary societies and to plan and conduct interclass and interscholastic debates and speaking contests.	2	
Printing and Proofreading.—To acquaint the teacher with the simple processes of the printer's art.	—1	7½

II Year		
English Literature.	6	
English Composition.—Writing letters and news and verse.	4	10
III Year		
American Literature.	3	
English Composition.—Writing stories, essays, and verse.	2	
Classical Literature.—A study through translations of certain masterpieces of Greek and Roman literature.	3	
Technique of the Drama.—The emphasis should be upon the development of skill in planning and conducting dramatic exhibitions.	2	10
IV Year		
English Literature.	3	
English Composition.	3	
Classical Literature.	3	9
4. *History Major with related subjects.*		
I Year		
North and South American History.	8	
Economic Geography.—The geography of commerce and industry.	3	11
II Year		
North and South American History.	4	
European History.	4	
Economics.	3	11
III Year		
European History.	8	
Sociology.	3	11
IV Year		
European History.	4	6
Government.	2	
	133	127½

(*C*) In order to complete the professional preparation of college men or women who have had the studies outlined above, the two State Teachers Colleges should devote 48 weeks to the course sketched below. This 48-week period should be divided into three terms of 16 weeks each. The first term might extend from June 15th to October 15th, admitting students who had spent four years on their college studies, and also the more mature and capable ones who had been able to satisfy the preliminary requirements in but three years. During this first term the new comers should have, in conjunction with the regular class exercises, at least four hours a week of observation and participation. Such work would make the technical part of the training more concrete and pregnant with meaning. The second 16-week term should then run from October 15th to February 15th, and afford the future teacher at least eight hours each week of real practice-teaching, four periods each being devoted to history and English. There should be responsible room-teaching as soon and to as great an extent as possible. Three periods each week should be given moreover to conferences. During the third sixteen weeks the technical studies should be brought to a close. The students would now be ready to appreciate courses on the Principles of Education, the Public School Systems, and the History of Education. In addition, there should be laboratory work on Tests and Scales.

The Teachers Colleges should receive new students twice a year. At the beginning of the third 16-week term, students completing their preliminary collegiate training by mid-year, should be provided for. Such an arrangement should prove quite welcome; for, as there are today some college students capable of doing from 120 to 125 semester hours in three years, there would be many more able to do so in three and one-half years if opportunity of doing so were offered them. The less capable and mature would, naturally, always spend four years in college. Such an arrangement would evidently make provision for individual differences.

The prospective teachers, entering at mid-year, would then pursue the same course as was outlined above for those entering in June, covering the first term's work, of course, from February 15th to June 15th; the second, from June 15th to October 15th and the third, from October 15th to February 15th.

During each 16-week term, the prospective teacher would have, according to the plan below, an opportunity to gain greater familiarity with his chosen field, not only by adding knowledge to his store, but also by working over the facts and information amassed at college. The course on Current Events would be especially productive of good on account of the great variety of subject-matter and the opportunities of selection, of interpretation, and of tracing to original sources for verification and extension. At present, much time is being wasted upon this particular item. Not everything found in print is worthy of the time and thought of the boys and girls of our high schools. It is in the training schools, it seems, that the cadet teacher should be imprest with this fact. During the period of observation and actual teaching the greatest chance for remolding his acquired knowledge, with teaching as a motive, would then be afforded, and all under the guidance and counsel of experts.

During the third 16-week term a large part of the teaching in the high school of the Teachers College should be done by members of the faculty of the training school. That would serve to keep the critic teacher and supervisor in the closest touch possible with actual teaching problems. And the high school pupils would profit thereby too. They would receive some instruction from matured and fully trained teachers, not merely from novices. The rest of the teaching of this term could be done by cadet teachers who, in the estimation of the training school authorities, had not reached the highest degree of efficiency though at the Teachers College during a period of 48 weeks. This, also, would serve as an excellent provision for individual differences on the part of teaching candidates.

TEACHERS COLLEGE COURSE

(The work should be arranged on the basis of 48 weeks.)

I Sixteen-week Term

Introduction to High School Teaching.—An orienting course aiming primarily to fulfill a "guidance" function by furnishing the student with such information and advice as will aid him in the teaching of his specific curricula. The differences among the various types of teaching service should be made clear, especially as regards the specific qualities essential to success in each type of work. 1

School and Personal Hygiene.—The primary emphasis should be upon personal hygiene, and particularly the hygiene of the teacher. Approximately one-third of the term should be devoted to the facts and principles of school hygiene that are of direct significance from the point of view of the classroom teacher: Ventilation, heating, lighting, the hygiene of eyesight and hearing, communicable diseases, physical defects, fatigue. 1

History of English Language.—The development of English forms of speech, idioms, inflections, spelling, and meanings. This course should involve some acquaintance with Old English and Middle English.	2	
Current Events.—Designed to train candidates in the proper study of foreign and domestic problems of government, economics, art, and literature, as discussed in the various monthlies and weeklies.	1	
Teaching of History and Civics.—The organization of courses in history for the high school; a study of source materials and other means of vivifying instruction; visual aids to instruction; practice in the use of projection-apparatus.	4	
Teaching of English.—The problems of the teacher of English in the high school; sources of illustrative material; effective methods of teaching difficult topics. Observation of class work should be a feature of this course.	4	13
Observation and Participation.—Each student should spend at least four periods a week in the training school, observing and participating in the class work. Conferences with the principal at regular intervals should provide instruction regarding the practice-teaching of the following term.	—4	
Physical Training and Games.	—3	
Handwriting.—This should include practice both in blackboard writing and in penmanship. Practice should be continued until a definite standard of proficiency, as measured by one of the handwriting scales, has been attained.	—1½	
Music.—An introductory course in public-school music.	—3	5¾
	24½	18¾

II Sixteen-week Term

History of English Language.	2
Practice-teaching.—Each student should spend at least one-half of each day in the training school, teaching, if possible, two different classes and subjects. Each student should also have practice in directing	

some phase of the social or athletic activities of the high school pupils.	8	
Current Events.	1	
Class Management and the Technique of Teaching.—This course should accompany the practice-teaching, deriving meaning from the teaching experiences of the student, and at the same time enlightening and interpreting these experiences. A discussion of class-room organization, class-room routine, the daily program, etc., should be followed by an analysis of the principal types of teaching and a study of the specific technique of instruction (assignments, teaching how to study, recitations, questioning, etc.). The problem of discipline should receive attention in this course, and a brief study of professional ethics should form its conclusion.	4	15
Teaching-conferences.—Each student should meet daily with his supervisor for the discussion of class work, and all practice teachers should meet once each fortnight for a general conference.	—3	
Library Technique.—Observing and assisting in the library.	—1	
Chorus.	—1	
Physical Training and Games.	—3	4
	23	19

III Sixteen-week Term

Principles of Education.—An integrating course which should aim to bring together and interpret the details of educational theory and practice represented by the preliminary courses and to leave with the student a unified body of educational doctrine. The genetic method should be emphasized wherever it will illuminate present tendencies or practices, thus familiarizing the student with the more important names and movements in the history of education. The course should involve a discussion of such topics as: The definition of education; the aims of education; the development of various conceptions of educational values; and the genesis and present status of certain

controverted questions of educational theory (such, for example, as the doctrine of interest, the relation of liberal to vocational education, the doctrine of formal discipline, etc.).	3	
Public-school Systems.—A brief course aiming to acquaint the prospective teacher with the institution in which he proposes to accept service. The treatment, again, should be largely genetic, and should include: The development and present organization of typical American public-school systems; the character of the teaching-population (age, experience, training, tenure, salaries, pensions); the money-cost of education and the sources of school revenues; the distribution of state funds; the development of the elementary curriculum; the relation of elementary to secondary education; and the outstanding differences between American schools and those of the principal foreign countries.	3	
The History of Education.—A study of the development of educational theory and practice as a chapter in the history of civilization.	5	
Sociology and Social Problems.—Designed especially to furnish the student with a perspective view of the place of education in the general social scheme and of the relation of the school to other agencies of social welfare.	4	
The Technique of Tests and Scales.—Instruction and practice in the use of standardized tests and scales.	1	19
History of English Language.	2	
Current Events.	1	
Music.	−2	
Physical Training and Games.	−3	
	24	21½
Total	71½	59½

In order to make the above outlines more graphic, the following charts were prepared:

(*A*) HIGH SCHOOL FOR COLLEGE ADMISSION

(Figures indicate number of 45-minute periods per week; the minus sign, no preparation)

I Year		II Year		III Year		IV Year	
English..........	5	English........	5	English.........	5	English........	5
Civics...........	5	Europ. Hist....	5	Europ. Hist....	2½	Am. Hist.......	2½
Gen. Sc..........	5	Algebra........	5	Am. Hist.......	2½	Probl. of Dem..	2½
Latin............	5	Latin..........	5	P. Geom.......	5	Physics........	5
Phys. Tr.........	−2	Phys. Tr.......	−2	Latin..........	5	Latin..........	5
Drawing.........	−2	Drawing.......	−2	Phys. Tr.......	−2	Phys. Tr.......	−2
Music...........	−3	Music..........	−3	Drawing.......	−2	Drawing.......	−2
				Music..........	−3	Music..........	−3
Total Credit.....	23½	....	23½	....	23½	....	23½

(*C*) TEACHERS COLLEGE COURSE FOR PROSPECTIVE TEACHERS OF ENGLISH AND HISTORY

(Figures indicate clock hours per week)

I Sixteen-week term			II Sixteen-week term			III Sixteen-week term		
Intro. to Teach.....	1		Man. and Tech.......	4		Prin. of Ed.........	3	
Sch. and Pers. Hyg..	1		Hist. of Engl. Lang....	2		P. Sch. Syst........	3	
Hist. of Eng. Lang..	2		Current Events.......	1		Hist. Engl. Lang....	2	
Teach. of Hist. and Civ.............	4		Pract-Teach..........	8	15	Hist. of Ed........	5	
Current Events.....	1		Conferences..........	−3		Current Events.....	1	
Teach. of Eng......	4	13	Library Technique....	−1		Sociology...........	4	
Observ. and Part...	−4		Chorus...............	−1		Tests and Scales....	1	19
Phys. Tr...........	−3		Phys. Tr.............	−3		Phys. Tr...........	−3	
Handwriting........	−1½					Music..............	−2	
Music.............	−3	5¾						2½
Total...........	24½	18¾		23	19		24	21½

(B) COLLEGE COURSE FOR PROSPECTIVE TEACHERS OF ENGLISH AND HISTORY

(Figures indicate number of hour-periods per week)

	I Year			II Year			III Year			IV Year			Total
(1) Identical for	English	3		Biology	3		General Psych.	4		Genetic Psych.	3		
all prospective	Chemistry	3		Physiology	3								
Teachers.	Occupations & Industries	2											
	Phys. Tr. and Games	−2	9	Phys. Tr. and			Phys. Tr. and			Phys. Tr. and			25
				Games	−2	7	Games	−2	5	Games	−2	4	
									6	Hist. of Phil.	4		
(2) Identical for pro-	Library Tech. and Sc.	2		Art	−2		German	6		Hist. of Science	2		
spective English	French	3	5	French	6	7				German	3	9	
and History													
Teachers.													
													27
(3) English:			3	English Lit.	6		American Lit.	3		English Lit.	3	½	
(a) Major	English Lit.	3		English Com.	4	10	English Comp.	2	5	English Comp.	3	6	24
(b) Related	Reading and Voice	2					Classical Lit.	3		Classical Lit.	3		12½
	Argumentation and Debate	2					Technique of Drama	2	5			3	28
	Printing & Proofreading	−1	4½										11
(4) History:	N. and S. Am. Hist.	8	8	N. and S. Am. Hist.	4								
(a) Major				Europ. Hist.	4	8	European Hist.	8	8	European Hist.	4	48	
(b) Related	Economic Geog.	3	3	Economics	3	3	Political Sc.	3	3	Government	2	2	
Total		34	32½		37	35		33	42		29	28	127½

THE PLACE OF THE NORMAL SCHOOL IN THE STATE SYSTEM

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DEVELOPMENT OF THE PRESENT SITUATION

The Normal School, the First Agency.—The very first training of teachers was undertaken with a small, local class by Father Demia at Lyons, France, in 1672. The first institution for such work was the "Seminary for Schoolmasters" established by Abbe de La Salle of the "Brothers of the Christian Schools" at Rheims in 1685. The first institution in Germany for training teachers was the "Seminary for School masters" established by August Herman Francke at Halle in 1697. Johann Julius Hecker, one of Francke's teachers established two others in 1738 and 1748, the latter in Berlin. About a dozen teachers' seminaries had appeared in Germany by the end of the eighteenth century and there were thirty-eight by 1840. In France, where the development of these institutions was for a long time slower than in Germany, there were, nevertheless, forty of them by 1840. Denmark established her first institution of the kind in 1789 and five additional ones in 1814. In England teacher-training was begun by Lancaster and Bell in London in 1805 in connection with their monitorial system of instruction.

The initiation of the normal school movement in the United States was a result of European influence, especially that of Germany. The first recorded mention in this country of the need of training teachers was in "The Massachusetts Magazine" in 1789. The first recorded suggestion of a state normal school was made by Dennison Olmsted of Yale University in 1816 in an address upon "The Ignorance and Incapacity of Schoolmasters." The first actual attempt at training teachers was made privately by the Rev. Samuel Hall at Concord, Vermont, in 1823. The next attempt was, also, by Hall at Phillips Academy, Andover, Massachusetts, where he had taken charge of the new department for training teachers. The first law providing for training teachers at public expense was that establishing such work in academies by the New York legislature in 1834. The first state normal school in the United States was established by Massachusetts at Lexington in 1839. A third, the famous Bridgewater school, was established in 1840. It was chiefly through the influence of James G.

Carter, Horace Mann, and Edmund Dwight that these first schools were established. Dwight had offered the state $10,000 to be used for training teachers upon condition that the state would duplicate the amount for the same purpose. The state accepted the offer and decided that the money could be best used in the establishment of state normal schools.

By 1875 there were about 70 such schools in the entire country. At the present time there are about 180 distributed from one to thirteen per state throughout almost every state in the union. While the development has been far short of what it ought to have been, not so much perhaps in the number of schools as in the functions and facilities of individual schools, it has nevertheless been striking and clearly shows, especially together with present prospects of a greatly increased development in the immediate future, that the state normal schools are permanent institutions, accepted by the American people as essential agencies in the educational system.

Its Original Purpose.—The original purpose of the state normal schools was to train teachers for the public schools. Since at the time when the first normal schools were established, and for long afterward, the public schools were almost entirely elementary, it has been held by many that those who established them intended that such institutions should always train teachers for only the elementary schools. A much more reasonable position would seem to be that by "public" schools was originally meant not only the elementary schools then in existence but any other public schools which might develop, and that the normal schools should eventually train teachers for all parts of the public school system whatever it might become. It is true that the primary obligation of the normal schools has been, is now, and for the future will be to the elementary schools, but that they may and should assume responsibility, also, for training teachers for the secondary schools should never have been open to question. That the agency designed to train teachers for the public school system should be held back and not be permitted to grow and develop as that system, itself, grows and develops is an unfortunate notion.

The Second Principal Agency.—The second principal agency for training teachers for the public schools which has developed is the high school training class, which first appeared in New York in 1834. The work done by this agency grew originally out of the academies. The high school training class next appeared in Maine in 1901. It is now found in twenty-five states and has the advantage of state aid in about half of them. A few years ago there were in New York 113 such classes with a total enrollment of 1800, in Minnesota 112 with a total enrollment of 1500, in Nebraska 209 with a total enrollment of 3800, and in Kansas 282 with a total enrollment of 5000.

The Third Principal Agency.—The third principal agency for training teachers for the public schools which has developed is the college and university department of education. The first agitation for such a department occurred in connection with the proposal of one at Amherst in 1826. The first departments actually established were those at Washington College in 1831 and at New York University in 1832. The one at New York University was the first to train teachers. Including those in private institutions there are at the present time about 475 such departments in the entire country.

Other Agencies.—Other agencies for training teachers for the public schools which have developed are private institutions, city training schools, and county training schools. Of the first, including the earlier academies, the most of which gave way upon the development of high schools, there are a great many, those of college rank being included in the 475 above. Of the city training schools, which had their origin in New York and Philadelphia from 1820 to 1830 and in the model classes of the monitorial system, there are about 30. The county training schools have appeared only in Wisconsin and number about 30. The purposes of these several agencies may be roughly indicated as follows:

(*a*) *The High School Training Class.*—The purpose of this agency has been to train teachers for the rural schools without denying that the normal schools, also, should do such work, but, nevertheless, restricting and checking their development in it.

(*b*) *The College and University Department of Education.*—The purpose of this agency has been not simply to cultivate cordial relations with the high schools and to bind them to it in a general way, but particularly to train teachers for them while insisting that the normal schools should be limited to training teachers for the elementary schools.

(*c*) *The Private School.*—The purpose of this agency, taking it as a class and including those of college and university rank, has been to train teachers for both elementary and secondary schools. When it has trained teachers for the elementary schools, it has done so without denying that the normal schools do the same thing but by restricting and checking their development in that work. When it has trained teachers for the secondary schools its attitude toward the normal schools and such work has been that of all other colleges and universities training teachers for secondary schools.

Nearly all private schools, not having the power of certification and not having their work accredited by state departments, have placed great emphasis upon preparation for state examinations. Many of them, usually those not denominational, have too often been dominated by a commercial motive, and of those that are denominational too many have perhaps permitted their sectarian characteristics to weigh too heavily.

(*d*) *The City Training School.*—The purpose of this agency has been to do for the city what the normal schools have been supposed to do for the state at large, *viz.*, to train teachers for both elementary (except rural) and secondary schools. It has come into existence to supplement the normal schools not only as to the number but as to the quality of teachers trained—the normal schools being unable to supply the cities either with enough teachers, or with teachers well enough trained to meet the higher demands from them as compared with those from the smaller places and rural localities which the normal schools have had chiefly in mind. Though meeting needs which the normal schools have not met, the city training school has, nevertheless, had some effect in retarding their development.

(*e*) *The County Training School.*—The purpose of this agency and its attitude toward the normal schools have been the same as those of the high school training class. Since it has appeared in only one state and is not likely to spread, its effect upon the normal schools in general is not a matter for serious consideration, but it has very greatly interfered with the development of the normal schools in the one state where it is found.

(*f*) *The State Examination System.*—While this system has not trained but only certificated teachers, it has almost everywhere seriously obstructed the development of the normal schools by the use of such low certification standards that examinations have provided a cheaper and quicker route to licences to teach than training in normal schools has done. In a certain north-western state where conditions are only worse than in most other states, it is possible, unless changes of regulations have recently been made, for a person to secure in succession by state examination two "elementary" certificates and to teach on them with renewals for fifteen years, and then to get in the same way two "professional" certificates and to teach on them with renewals for the remainder of his life, all without ever even knowing that the state has any such institutions for training teachers as normal schools.

Summary.—The normal schools thus find themselves in a cramped and crowded position, surrounded, as it were, by other teacher-training agencies— the high school training class, the college and university department of education, the private institution, and the city and county training schools—and the state examination system, all competing with them in one way or another and some distinctly limiting their development by sharing their work in fields which they alone should have.

It may be that the normal schools are partly to blame, because of their failure to make a more energetic attempt so to develop themselves as to be able to meet the growing demand for trained teachers, for the difficult situation in which they are placed. Perhaps had they tried harder, they could have so developed themselves as to be able to do the entire work of training rural teachers and thus have forestalled the development of the high school training classes and county training schools. It might not have been either possible or desirable for them by more energetically promoting their own development to head off that of the college and university department of education in training high school teachers, but perhaps by sufficient enterprise they might have secured such a hold upon this work that those agencies would have asked only to share it. Likewise much of the teacher training done by city training schools might not have passed to them but have been left for the normal schools to do. It is very likely that the normal schools have shown in too great a degree a lack of vision and enterprise due, in part at least, to the stifling influence, which perhaps they could not have overcome, of the small towns in which they have too often been located, and to inadequately prepared faculties and unprogressive, autocratic presidents.

NEEDED ADJUSTMENTS

Some such adjustments of the normal schools to their competing agencies as the following would greatly improve their situation by helping them the better to fulfill the mission, for which they are intended, of training public school teachers of all kinds:

(*a*) *To the High School Training Class.*—Temporarily, this agency should be controlled not independently of, but either *with* or *by*, the normal schools; ultimately, it should be discontinued so that all of the work of training rural school teachers may pass to the normal schools. This is not to underestimate the great good that the high school training class is now doing in the training of rural teachers while the normal schools are unable to do all of that work, nor to deny that it will be obliged to do more of such work than it is now doing before it should do less. It will be justified in giving up that work only as the normal schools become better able to do it.

(*b*) *To the College and University Department of Education.*—Temporarily, all college and university departments of education and some normal schools should train teachers for secondary schools; ultimately, all such departments and all normal schools should train teachers for both elementary and secondary schools. No strict line should be drawn with teachers for secondary schools trained only in college and university departments of education and teachers for elementary schools trained only in normal schools, but many normal schools ought for a long time to come to train teachers for the elementary schools only.

(*c*) *To Private Institutions.*—Temporarily, neither state departments nor state institutions for training teachers should accredit work done in these institutions; ultimately, their work of training teachers for public schools should be discontinued and given over entirely to public institutions. While the ultimate arrangement is being brought about, state departments and institutions might accredit work in teacher-training done in private institutions, but only if such work is controlled and inspected by the state.

(*d*) *To the City Training School.*—Temporarily, this agency should be placed under state control and inspection, if its work is to be accredited; ultimately, it should be made a state normal school in every sense.

(*e*) *To the County Training School.*—The same as in the case of the high school training class.

(*f*) *To the State Examination System.*—Temporarily, this system should lift and more carefully standardize its requirements for certificates; ultimately, the whole matter of certification of teachers should be placed in the hands of the public teacher-training agency authorities. This would require certain additional adjustments of an important sort.

Entrance Requirements.—Especially in a state where there is more than one normal school, the different schools are likely to be drawn into damaging rivalry with each other for students. Some central authority should carefully regulate the admission requirements of all, and in the interests of efficient teacher-training the minimum entrance requirements for all normal schools everywhere should be made high school graduation as soon as possible.

Length of Curricula.—Likewise in a state where there is more than one normal school, and for the same reasons, some central authority should carefully regulate the length of the curricula of the different schools and, also, in the interests of efficient teacher-training the curricula of all normal schools everywhere should be made four years beyond the high school in length as soon as possible.

Qualifications of Faculty.—Teachers on a normal school faculty doing work of college grade should be fully as well prepared for their work as college and university teachers are for theirs. This is necessary, if normal school work intended to be of college rank really is to be of such rank, and if normal schools intended to be of college rank are really to have the dignity and worth that they should have.

General Character of Normal School.—The state normal school should be a strictly professional institution and not one of a mixed and confused academic, trade, and professional kind. So far as possible the work of training teachers should be in distinct and separate institutions. Conditions which for the present justify training teachers in the same institutions where persons are prepared for other callings should pass away. Until they do, a teacher-training department in an institution giving other training should be as separately and distinctly organized and administered as possible.

Types of Normal Schools.—The types of normal schools which a state should have should be determined by the needs of the state. They need not be the same for all states. In a given state where there is more than one school, the various teacher-training functions should be so distributed among the different schools as to best serve the interests of the state. Very likely all of the schools would train teachers for the elementary schools, while only some of them would train teachers for the secondary schools or for special lines of public school work.

Extension Work.—Normal schools everywhere should accustom themselves to the practice of active and systematic work with children, teachers, school authorities, and parents throughout the state or districts which they are to serve, as well as to such work as can be done upon their own premises. Such extension work not only greatly widens the usefulness of normal schools, but by keeping them in touch with conditions and needs in the field it greatly enlightens and stimulates them in the work which they should do on their own plants.

Number of Schools in a State.—The number of schools in a state should, also, be determined by the needs of the state, keeping in mind especially the number of teachers needed, ease of accessibility, that the more normal schools there are the fewer high school training classes and private agencies there will be, that too many small schools means too much over-head expense, that too large schools may mean inefficient work, etc.

Location.—The location of normal schools within a state should, also, be determined by the needs of the state with such things particularly in mind as equitable distribution of institution influence and advantages, and that for the sake of outside social and educational advantages to students and a large enough number of children for effective training departments, they should be placed in the more populous communities.

Districts.—In a state where there is more than one normal school, districts should be formed in which the different schools would operate intensively in advertising, extension work, etc. Such an arrangement would avoid much of the wasteful rivalry which results where each school works intensively over the whole state and would make the total work of all the schools more efficient than it could otherwise be.

Administration.—The normal schools of a state should be administered with the university department of education—all together constituting the state's total unified teacher training service. The almost universal conflict between the normal schools of a state and the university department of education should be gotten rid of at once, and it can be done only by bringing both normal schools and university department together in a coordinate way under central control.

Finance.—The important thing here is the doing away with the "log-rolling and knifing" which is so often indulged in by competing teacher-training agencies each of which seeks as much for itself as it can get with little or no thought of what any other deserves. Central administrative control which will fairly consider the responsibilities and needs of the different agencies and see that the state's support is properly distributed among them is the only cure for such an illogical and harmful situation.

National Aid.—It is strange that the state normal schools, considering all that they mean to the educational welfare of the country should be perhaps the last instead of one of the first public educational agencies to receive direct aid from the general government. Happily the day seems at hand when the people realize that the state's best investment is in well-trained teachers for its schools, and the normal schools will surely not be required to wait much longer for the national recognition and support which they deserve.

Normal Schools and Democracy.—If a democracy requires universal education, and no one doubts it who knows what democracy means; and if this country is to remain a democracy, or rather to become more of one than it has ever been, then the ideal of a well-trained teacher in every school room is sound and ought to be realized at the earliest possible moment. It cannot be realized without the normal school.

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THE NEED OF A CORRECTIVE GYMNASTIC DEPARTMENT IN THE PUBLIC ELEMENTARY SCHOOL

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The large numbers of the children in the public schools that have one or more forms of physical defects constitutes a problem that demands the careful attention of educators. These defects cover a wide range of deviations from the normal and are due to many causes. Many such defects are merely postural and entirely remediable by right methods; some by reason of long neglect are deep seated; and some few may be of the congenital type or due to a permanent injury. Often parents and teachers are not very conscious of the seriousness of the situation. The effects of bad posture, malnourishment, and early neglect are so common that they are often passed by as though they were natural conditions in children. Physical defects often prove an impediment to the right kind of mental as well as physical activity, besides being a real source of unhappiness to the children afflicted with them. It is of particular importance that these defects receive attention in the early years of life, since during that period the tissues yield more readily to corrective treatment.

Until recently children with varied types of defects, both physical and mental, as well as superior individuals, were enrolled for physical training in the same classes with normal children and given similar treatment. Now the need of special remedial treatment following some sort of diagnosis of their need is becoming quite generally recognized for subnormal, superior, anemic, and other types of pupils with special needs. But the urgent case of the physically defective child demands that adequate provision be made for his welfare, also. Since the conditions of health and physical efficiency for boys and girls are closely related to the general social welfare, this need may rightly be regarded as a concern of the public school.

It must be recognized, however, that the usual school exercises in physical training are designed for the normal children, and are therefore not sufficient for the corrective treatment of these definite physical defects. There must be systematic training specifically designed to strengthen muscles that are weak and to establish correct muscular habits. As early as 1913 Bolin[1] advocated the establishment of gymnastics as an orthopedic prophylactic in the public schools. He urged that we turn our attention to the "maintenance of an erect carriage and the prevention of the common complex deformity of drooping head, round shoulders, flat feet and the protruding abdomen." The validity of this sound position has, unfortunately, thus far received recognition mainly in theory rather than in practice.

The school time of life affords an excellent opportunity for the careful observation and correction of the physical defects and postural habits which impair normal functions. The great functions of circulation, excretion, respiration, and digestion may be seriously interfered with by the cramped chest and incorrect carriage which are common in poor posture. Erect carriage is essential for the body's full health, and for its proper growth and development. Fatigue comes more readily, the power of resistance to disease is decreased, and disease germs perhaps flourish more surely in a body whose general tone and resisting power are reduced. The posture of the spine, chest, and shoulders throughout the growing period will influence very greatly their final shape and proportions.

The following quotation from Terman presents the case: "If spinal curvatures are to be cured or arrested, early diagnosis is essential. Spinal curvatures can nearly always be improved by proper treatment, and the postural cases, (cases in which the bone itself has not become deformed) can be cured altogether. Orthopedic exercises may and should be given in the public schools for the benefit of children with spinal deformities. Special classes are needed for this purpose. The work should be done by a specialist in physical training."[2]

It was in 1915 that a plan was first presented to the Board of Education of Kansas City, Missouri, to make provision for correcting the physical defects of the school children. The plan adopted was to be worked out tentatively in one elementary school. The Scarritt School was chosen for that purpose and since 1916 the corrective gymnastic work has been carried on there.

This report deals with the pupils selected from the 1000 children of the Scarritt School, all of whom were given a thorough physical examination in September, 1920, by highly competent teachers trained especially for this type of work. Every consideration was given to making the examination thorough. The data for each child were carefully recorded. During the last week of May, 1921, the examination was repeated by the same teachers. After the first examination the results of the work in corrective gymnastics could be seen by a comparison of individual records. The examinations were in no sense a part of the general medical inspection; but they were made under special medical advice and supervision.

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[1] Bolin: *N. E. A. Proceedings*, 1913, p. 688.

[2] Terman, L. M.: "Hygiene of the School Child," p. 84.

From the first examination the pupils for the corrective class were selected. Table I shows the number of pupils with physical defects as they were found in the examination in September. It will be more suggestive when it is known that the Scarritt School is in a residential district of the city with no factories or large commercial establishments within its territory.

TABLE I.—THE NUMBER AND PER CENT OF PUPILS HAVING SOME FORM OF PHYSICAL DEFECT REPORTED IN THE EXAMINATION OF THE SCARRITT SCHOOL, SEPTEMBER, 1920

Pupils	Number examined	Number physically defective	Free from physical defect	Percentage of total found defective
Boys	487	223	264	45
Girls	519	266	253	51
Total	1006	489	517	48

Many of the defects reported in Table I, especially of the younger children, were as yet functional; but it is established that such functional defects may become anatomical if not given special scientific attention at the right time. The prevailing types of major defects as brought out in this examination, using the commonly accepted terminology, were as follows:

1. Lateral spinal curvature, or scoliosis.[1]
2. Inward spinal curvature, or lordosis.
3. Outward spinal curvature, or kyphosis.
4. Flat feet.

Many of the number reported in Table I were of the more usual minor defects.

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[1] Used here to designate both postural and more-fixed lateral deformity or deviation of spine.

Table II, which follows, shows the distribution by grades of the total number of defects. Many pupils have several defects, which makes the total number greater than the number of pupils in school. This table includes curvature, flat feet, and all other defects.

TABLE II.—THE TOTAL NUMBER OF PHYSICAL DEFECTS BY GRADES, REPORTED IN THE EXAMINATION OF THE WHOLE SCHOOL IN SEPTEMBER, 1920

Grade	Number, defects for boys	Number, defects for girls	Total number, defects
Kindergarten	21	62	83
First	46	154	200
Second	78	90	168
Third	146	135	281
Fourth	58	95	153
Fifth	152	193	345
Sixth	101	132	233
Seventh	60	175	235
Total	662	1036	1698

In Table III, which follows, only cases of scoliosis, lordosis, kyphosis, flat feet, and infantile defects are included, that is, purely functional defects are omitted.

TABLE III.—THE NUMBER OF INDIVIDUALS HAVING ONE, TWO, THREE OR MORE DEFECTS, WHO WERE SELECTED FOR CORRECTIVE TREATMENT BY THE EXAMINATION IN SEPTEMBER, 1920

	Number having one defect	Having two defects	Having three or more defects	Total
Boys	19	14	10	43
Girls	21	21	14	56

The corrective class did not include all of the cases needing special physical attention or corrective treatment. It was not possible to care for a larger number with the assistance provided. During the year 1920–1921 two corrective teachers were employed, one for the girls, and one for the boys. Previous to that time there had been only one such teacher available. Since there is absolutely no economy in crowding the department, only as many cases were included for treatment as could be taken care of in a satisfactory manner.

The question of diet was regarded as an inseparable part of the corrective work for these students because the effect of malnutrition on mental as well as physical development is probably very great. Undernourishment tends to decrease the power of resistance to disease. Malnourished children become an easier prey to many kinds of disease. We must make the malnourished child physically fit. Society owes it to the child to give him a chance with his fellows. The children of the corrective group in this school who were below normal weight (Wood's Table) were given a lunch of milk and wafers at the mid forenoon, or at the close of their exercise. Frequently the very anæmic child was given a period of rest and relaxation (including sleep) following the exercise period. Tables IV, V, and VI deal with the weights of the corrective classes for the two dates under comparison. As a basis for computation of weights Wood's Tables were used.

TABLE IV.—WEIGHT TABLE OF GIRLS WHO WERE IN THE CORRECTIVE GYMNASTIC CLASS FROM SEPTEMBER, 1920 TO JUNE, 1921 (FIFTY-TWO CASES INCLUDED)

Total weight, September, 1920.......	3197 pounds	Average......	61.4 pounds
Total weight, January, 1921.........	3438 pounds	Average......	66.1 pounds
Total weight, June, 1921............	3590 pounds	Average......	69.0 pounds
Average gain from September to June.............			7.6 pounds per girl

Nineteen of the pupils reported above gained from 1 to 5 pounds; 19 pupils gained from 6 to 10 pounds; 14 pupils gained from 11 to 15 pounds each.

The standard average gain by Wood's table is 4.5 pounds per girl. The average gain of corrective girls, table IV, was 7.6 pounds per girl.

TABLE V.—WEIGHT TABLE OF BOYS IN THE CORRECTIVE CLASS SEPTEMBER, 1920 TO JUNE, 1921 (FORTY CASES INCLUDED)

Total weight, September, 1920.......	2952 pounds	Average......	70.3 pounds
Total weight, January, 1921.........	3116 pounds	Average......	77.9 pounds
Total weight, June, 1921............	3139 pounds	Average......	78.5 pounds
Average gain, September to June.................			8.2 pounds per boy

Two of these pupils gained 0 in weight; 18 pupils gained from 1 to 5 pounds each; 11 pupils gained from 6 to 10 pounds each; 6 pupils gained from 11 to 15 pounds each; 3 pupils gained from 16 to 20 pounds each.

The standard average gain, Wood's table, is 5 pounds per boy. The average gain, boys, of Table V, was 8.2 pounds per boy.

TABLE VI.—NUMBER OF BOYS AND GIRLS OF THE CORRECTIVE CLASS OF NORMAL WEIGHT OR BELOW COMPARED FOR THE TWO PERIODS

	Normal		Underweight		10 per cent underweight		Total
	Boys	Girls	Boys	Girls	Boys	Girls	
September, 1920......	13	10	16	20	11	22	92
June, 1921...........	27	15	7	23	6	14	92

NOTE.—Underweight means below normal, (Wood's table), but does not include those marked 10 per cent underweight. Normal weight also includes any who were overweight.

In the period indicated, the number of boys classed as normal in weight increased over 100 per cent; the number of girls classed as normal in weight increased 50 per cent; the number of boys 10 per cent underweight decreased 45 per cent; and the number of girls 10 per cent underweight decreased 36 per cent.

THE CHARACTER OF THE GYMNASTIC TREATMENTS

The ideal of corrective gymnastics is to place all exercises before the child so as to give an impelling motive, lead to desirable physical habits, and bring about proper movements and controls. In fact, the aim of corrective gymnastics should be at least two-fold; first, a correction of the defects that brought the child into the corrective class, and second, the awakening of an interest and pride in his physical nature and a strong desire to improve his physical self. These two things have been kept constantly in mind in the work of the corrective department in the Scarritt School.

Children cannot be expected to correct serious faults and weaknesses of the body by efforts exerted only when they are told by parents or teacher to straighten up. The best work is done by teaching—not by nagging or preaching. In brief, children must be assisted and encouraged in correcting their own deficiencies. Some children can place themselves in correct posture by following a few specific examples of the instructor, but, because the muscle control for such correction is often weak, it is necessary for most children that they be assisted in getting such correct position. If we merely tell a child to straighten up, in endeavoring to do it he often assumes an overcorrect posture, which is really a mistaken effort to obey.

To secure full benefit, the work must be both physical and psychic in method. By means of large mirrors, the child may see himself exercising, see what postures are necessary, and that he can attain them if he will but pay the necessary price of toil and care. The exercises required are more work than play, but of such a nature that the child is willing to go on with them as he sees the results sought. It is essential that the exercises be regular. Whether he uses the apparatus, does simple balance or walking exercise, stretching, chinning, or whatever it may be, the instructor should aim to give the child the idea of self-mastery.

One feature of the work requires the children selected for corrective treatment to carry on at home such part of the exercises as can be done without the apparatus. Before a child is received into the corrective class, the parent is called into consultation; often the parent is present during the examination. A careful explanation of the diagnosis of the case is made, and the need of home assistance is emphasized. If the parent is willing to assist by seeing that the child exercises daily, the child is then entered in the class. This makes the membership in the corrective class appear almost as a privilege. Each child spends at least two periods per week during the year at corrective work. The director for the girls, and one assistant, devote three days per week to their classes, and a man for the boys gives two days per week. Parents are urged to visit the classes at any time, for it is felt that the more the parent understands the real condition, the greater will be the cooperation given.

A more detailed description of the treatments need not be given here. Modern apparatus is supplied in the gymnasium. The work is under the immediate supervision of instructors especially trained for the task. The pupils of the corrective class are arranged in groups of four, for the purpose of work in the gymnasium. However, they are given individual help and assistance until they are able to fit into a group. Different types of defects requiring different apparatus are grouped together for the purpose of economy in handling. The instruction is essentially individual and individual pride both in achievement and in rate of improvement are carefully cultivated.

Each corrective pupil has been scheduled for work in the corrective gymnastics class during the usual school hours, for which he withdraws from the regular academic class work. Usually some provision was made for the child to carry on his regular work at other times, but this was not possible in every instance.

The general physical results of the corrective gymnastic treatment for the year 1920–1921 are to some extent evident in the amount of increase in weight and in chest expansion for every individual receiving the treatment; by improvement with reference to nutrition in a majority of cases, including those whose need was greatest; and by the success in correction of the defects treated as represented by 32 per cent excellent results, 52 per cent good, 15 per cent fair, and one pupil for whom the results were poor. These results are the recorded judgments of the corrective staff. Thus it is clear that the corrective results were good or excellent for more than 80 per cent of the cases treated during the past year.

A clearer idea of the nature and extent of the results of corrective treatment for these school pupils may be secured from a brief presentation of the facts for some typical cases of those reported.

TYPICAL CASES

From the ninety-nine cases treated in the corrective department in 1920–1921, several typical cases were selected, which were photographed before and after treatments. These photographs were taken by a reliable photographer, and the greatest care was exercised that the child should not assume a superposture. In each case, the child and parent were willing that the photograph should be taken. The corrective gymnastic teacher used much care in arranging the pupil so that the tracings were correct, and that the child did not assume a posture that was not habitual at the time the photograph was taken. In order that the same conditions might obtain relative to the taking of the pictures, the same period of the day was used for both sets of pictures. Both groups were taken in the regular gymnasium of the school. The parents of the children were present. The same photographers and teachers secured the two sets of photographs. These pictures were then filed as a part of the school records for the corrective gymnastics pupils.

Case No. 5, Scoliosis Lordosis.—This is a case of a fifth-grade girl of ten years, with well developed scoliosis, lordosis, and a strong tendency to kyphosis. In addition she had flat feet, which caused her to tire easily when walking or standing. This little girl of ten years became an untiring worker in the gymnasium. She says she does not tire so easily now. She is also happier in the physical poise she is now able to maintain. Though there is a slight curve in the dorsal region, yet her improvement shows what a girl of ten is able to do for herself when exercising carefully under direction. Her nutrition has improved, and she has gained in weight. She has had only one year of corrective work.

Case No. 10, *Anemia.*—This girl of seven years, was a pale, anemic little girl in the second grade. She had dark circles under her eyes, showed an entirely passive attitude toward her school work, was shy and reticent. She never laughed as other children did. Her stooped posture, flat chest, and habits of melancholy were the cause of much concern. With the thought that her symptoms were perhaps the index of other evils. It was seriously considered whether she should be excluded from the school. However, the corrective teacher took her in charge in December and the results obtained within the five months have been most marked. She was in June, much more alert, happy and interested. She continues to show great gain. An anemic child has great odds to overcome in gaining weight or physical poise. This child has succeeded. She has become interested in better posture and her photos show how well she is succeeding.

Case No. 11. *Scoliosis and Lordosis.*—This fourteen-year-old sixth-grade boy has a pronounced case of scoliosis and lordosis. His photographs preceding the treatment, show a right-dorsal left lumbar curve and a low right shoulder blade, as well as the further characteristics of protruding shoulder blades, flat chest, sway back, and protruding abdomen. His posture after the corrective treatment of one school year makes it seem hardly possible that it can be the same boy. In addition to his other defects, he had flat feet, and was much underweight as a result of very poor nutrition. This boy has now developed a splendid chest expansion, has shown a decided gain in nutrition, adding 13 pounds in weight during the 10 months treatments.

The boy is happy in his ability to take a more natural position. He was formerly almost unconscious of his defects, and his parents did not seem to realize his condition until they visited the corrective class. When shown the photographs of his boy's condition, the father could scarcely believe the boy was his own. He said: "I knew my boy was stoop-shouldered, but I thought he would straighten up all right. I had better take him at once to a good specialist." When advised that the thing to do was to assist the teacher in having the boy do the "straightening up," the father was greatly relieved.

What has been accomplished with these typical cases, has been accomplished also with many similar cases in the corrective classes.

These boys and girls testify more than we can say, to the efficacy of corrective gymnastics, and to the influence of such a department functioning in an elementary school. From children who must of necessity stand and watch others at play, this work develops children who may likewise enjoy the wholesomeness of bodily recreations. From this purely physical aspect of the work alone, it seems that corrective gymnastics fulfills so important a place as to justify it in the elementary school curriculum.

The corrective department affords an excellent opportunity to carry health instruction over into action, and to bring effective remedies to the practical needs of the children in matters of health and physical welfare. An examination is worth little if nothing is done beyond filing a record or making a recommendation. Failure to move parents to action has been one of the weaknesses of the medical and physical inspection. Since the work has been made a part of the curriculum in the Scarritt School, we find no objection but instead great cooperation by the parents. It is easier now to get the child in this school placed without delay where his physical needs will be carefully looked after.

THE RELATION OF CORRECTIVE GYMNASTICS TO OTHER SCHOOL WORK

One may ask, how is the academic progress of these pupils affected by the spending of part of their time in corrective work? In answer to this question, their unusual success is shown by the school credits reported in Table VII. It is evident that the total credits for these pupils in 1921 is much increased over the total for 1920. Their average credit grew from what was less than the average credit for the school in 1920 to one surpassing that of the school as a whole in 1921. The letter system of grading is used in the schools (F, failure; M, medium; G, good; E, excellent; D, distinguished). Teachers use plus or minus to indicate differing degrees of grades. School marks, as used here, mean the average (mean) grade for the year for all subjects taken, including physical training, etc., as recorded in June of each year. Grades are given in each subject each ten weeks, with an average at the close of school in June. Thus each child would have forty grades for his ten school subjects. The actual school marks referred to here are the averages of these forty grades for each pupil.

The teachers were unaware that the school marks were to be used in the evaluation of the work of the corrective gymnastics, nor were many of the teachers of the school aware until late in the year that any special study of the corrective work was being made. Therefore the school marks were not highly weighted because of sympathy with the results hoped for. The fact that many of the pupils recited to several teachers, will also be considered as limiting the influence of a special subjective factor in the school marks. The fact that the pupils of the corrective class withdrew for their gymnasium work during the regular academic class time, thus missing some class instruction, sometimes without the teacher's fullest approval, must be regarded when evaluating the school marks.

Table VII.—Comparison of Average School Marks of the Corrective Class with the Average School Marks of the Entire School, 1920–1921

Average school marks received	Corresponding school credits	Entire school				Corrective group			
		1920		1921		1920		1921	
		Number of cases	Total school credit	Number of cases	Total school credit	Number of cases	Total school credit	Number of cases	Total school credit
D	14	11	154	9	126	0	0	2	28
D−	13	2	26	1	13	0	0	0	0
E+	12	6	72	11	132	0	0	4	48
E	11	74	814	67	737	10	110	9	99
E−	10	7	70	11	110	0	0	2	20
G+	9	47	423	49	441	1	9	7	63
G	8	147	1176	134	1072	16	128	20	160
G−	7	25	175	31	217	2	14	2	14
M+	6	65	390	62	372	3	18	11	66
M	5	155	775	131	655	41	205	29	145
M−	4	38	152	41	164	7	28	4	16
P+	3	5	15	16	48	0	0	2	6
P	2	42	84	45	90	16	32	4	8
P−	1	4	4	0	0	1	1	0	0
F	0	0	0	0	0	1	0	2	0
Totals		644	4330	644	4186	98	545	98	673
Average grade		..	6.7	...	6.5	..	5.5	..	6.8

Table VII gives the school mean for 1920 and 1921 as 6.7 and 6.5 respectively. The mean for the corrective pupils for the same period is 5.5 and 6.8 respectively. Thus the corrective pupils made greater average gain in school marks than did the entire school during the same period, and their average grade has come to surpass the average for the entire school. The statement that school marks improve as the physical condition of the pupils improve, certainly seems to hold true concerning these pupils.

Applying the same method of evaluation to the emotional and volitional stability of the pupils, we find that they make quite definite improvements as is shown by the following table, which deals with deportment marks.

Table VIII.—Comparison of Average Deportment Marks of the Corrective Class with the Average Deportment Marks of the Entire School, 1920–1921

Average deportment marks	Corresponding school credit	Entire school				Corrective group			
		1920		1921		1920		1921	
		Number of cases	Total school credit	Number of cases	Total school credit	Number of cases	Total school credit	Number of cases	Total school credit
D	14	15	220	25	275	1	14	7	98
D−	13	0	0	0	0	0	0	0	0
E+	12	2	24	2	24	0	0	0	0
E	11	196	2156	169	1859	17	187	37	407
E−	10	6	60	8	80	0	0	1	10
G+	9	24	216	46	414	1	9	10	90
G	8	276	2208	256	2264	42	336	33	264
G−	7	20	140	21	147	1	7	0	0
M+	6	16	96	21	126	1	6	1	6
M	5	54	270	65	325	32	160	8	40
M−	4	4	16	3	12	3	12	0	0
P+	3	3	9	1	3	0	0	0	0
P	2	9	18	12	24	0	0	1	2
P−	1	1	1	0	0	0	0	0	0
F	0	0	0	2	0	0	0	0	0
Totals		631	5426	631	5412	98	732	98	917
Average grade		...	8.5	...	8.5	..	7.4	..	9.3

Comparing the mean of the corrective pupils in deportment for 1920 with that of the entire school for the same period, we find that the mean of the corrective group (7.4) was far below the mean of the school (8.5). In 1921 the mean in deportment of the corrective pupils was considerably above the mean of the school, which was the same as in 1920. In other words, the average of the school marks in deportment for the entire school remained constant, while the average of the marks in deportment for the corrective class greatly increased. Considering the relatively large number of cases in the corrective class, and the fact that they are widely distributed throughout the grades, this increase is highly indicative of greater emotional stability.

INTELLIGENCE SCORES OF THE CORRECTIVE GYMNASTICS CLASS

The pupils of the entire school, above the third grade, were given the National Intelligence Test, Scale A, in January, 1921. This test included the pupils of the corrective class, above the third grade. It was given by one trained to give intelligence tests, and all papers were scored under her direction. Scale B of the same test was given in June, 1921, by the same instructor, to about 150 pupils, including the members of the corrective class above the third grade. The results of these tests are given in Table IX.

TABLE IX.—DISTRIBUTION OF SCORES OF THE NATIONAL INTELLIGENCE TESTS, A AND B, GIVEN TO THE PUPILS OF THE FOURTH, FIFTH, SIXTH AND SEVENTH GRADES OF THE SCARRITT SCHOOL, JANUARY AND JUNE, 1921

Intelligence score	Number in school		Corrective pupils	
	Test A	Test B	Test A	Test B
170–179	...	1	..	1
160–169	7	6	3	1
150–159	18	5	3	4
140–149	37	13	4	9
130–139	51	17	7	7
120–129	71	18	7	8
110–119	70	37	13	8
100–109	48	21	1	3
90– 99	58	8	5	6
80– 89	36	6	2	2
70– 79	31	7	4	3
60– 69	20	3	1	1
50– 59	11	...	1	
40– 49	7			
30– 39	4	...	2	
20– 29	2			
Total number pupils............	471	150	53	53

Tests A and B for the school include the corrective pupils. Using the data given in Table IX we have constructed Table X.

TABLE X.—ANALYSIS OF SCORES IN THE NATIONAL INTELLIGENCE TESTS, SCALES A AND B, GRADES FOURTH TO SEVENTH INCLUSIVE, SCARRITT SCHOOL, JANUARY AND JUNE, 1921

	Test A (January)		Test B (June)	
	The school	Corrective pupils	The school	Corrective pupils
25 percentile	90	95	90	100
Median score	110	108	110	125
75 percentile	120	131	130	141

It will be seen from Tables IX and X that the scores of the corrective pupils, in the intelligence test, compare well with the scores of the school; while the upper and the lower quartiles of the corrective pupils' scores are higher than for the scores of the school. The attainment of the school remains about the same in Test B as in Test A, while that of the corrective class shows much improvement in Test B over Test A.[1] The increase in score of the corrective pupils seems to be related to the effect of the corrective work. Perhaps we can draw no further conclusions than that the corrective class is not an inferior group as compared with the school in mental ability.

In January, 1921, the Thorndike-McCall Reading Test, Form 2, was given to the pupils above the third grade, including the corrective pupils. This test was given by an instructor trained to give educational tests, who supervised the scoring of the papers. Form 3 was given by the same instructor in June, 1921 to the same pupils. We may thus make a comparison of the reading scores of tests given five months apart. The results of the reading tests showed that the median scores for the corrective pupils in June and January were above the median scores for the school. As measured by this test the corrective pupils read well as compared with the school. According to the tests given, the corrective group made a greater gain in both rate and comprehension in reading, than did the school during the same time period.

Considering the success of the corrective gymnastic treatment in this school during the past year, in accomplishing corrective results;

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[1] The correlation of these tests as given by the authors is 0.928.

in the improvement in weight and nutrition of pupils treated, as well as in school subject and deportment grades; and the ability of these pupils following the treatment to make scores in reading and intelligence tests above the average for the school as a whole and much above their own average scores preceding the corrective treatment, the following conclusions seem justified by this study:

1. Corrective gymnastics do correct physical defects of school children.

2. There is evidence of a close relation between corrected defects and improved school marks.

3. The 92 children taking corrective work in the Scarritt School improved in weight beyond the usual rate of gain.

4. The children taking corrective work in the Scarritt School improved in nutrition and health.

5. Improved physical condition of these children means more highly stabilized temperament, in school and home, as evidenced by better deportment, and favorable comment by teacher and parent.

6. Corrective gymnastics makes these adjustments during the child's progress at school at a considerable saving of time to both pupil and parent; there is no time lost in getting to and from treatments, nor in remaining out of school for treatments.

7. The corrective gymnastics class progressed in school subjects at the normal rate, or above, as evidenced by mental tests and educational measurements.

8. Corrective gymnastics as given in the Scarritt School, which provides for any child from kindergarten to seventh grade, meets the physical needs of the pupils of the elementary school sufficiently well to justify such a plan as a part of the regular program of an elementary school.

BOOK REVIEWS

BOYD H. BODE. *Fundamentals of Education.* The Modern Teachers' Series, No. 4. New York: The Macmillan Company, 1921. 245 pages.

Here is a book leveled, as the preface says, at "preconceptions" that "vitiate educational theory and practice" and which "are unjustifiable in the light of modern knowledge." It undertakes "to interpret present-day educational problems from the standpoint of pragmatic philosophy." It does this, and in a manner as singularly engaging as the interpretation is for the most part thoroughly satisfying. The composition of the book is a very rare combination of the several virtues of insightful exposition with quite unusual literary skill. The adjectives, deft, light, bright, sure, swift, only poorly suggest the general atmosphere in which the treatment of such difficult and tangled topics as educational values, interest, duty and effort, the thinking process and the like goes forward. The simplicity and straightforwardness of the discussion; the unusual facility at illustration; the appreciative rather than the deprecatory tendency of his criticism; the swift movement of the argument—these are all so obvious as to be striking, and vividly suggest the finished teacher that the author is said to be. The treatment of topics like the project method; the suggestion of the unrealized possibilities of the common subjects—these are only casual hints of matters that the class room teacher will be grateful for.

Chapters nine, ten, and eleven (The Soul-substance Theory; The Doctrine of Mental States; Consciousness as Behavior) give a much-needed orientation in regard to the practical relations of psychological theory to educational procedure which, so far as the reviewer knows, is found nowhere else. They alone are a contribution amply justifying the book—though they raise baffling problems, especially in regard to the professional education of teachers, which for the present must leave the curriculum maker an eclectic psychologist.

Like all good books, its debts are numerous and heavy. Footnotes and the index on the whole generously suggest these. In the latter, for example, it will be noted that two men are conspicuous by reason of the frequent references to their thought. These are Dewey and Bagley. A careful reading of the book gives the general impression that, like all conscientious authors, Mr. Bode has been punctilious in labeling the goods of others—either by direct citation or implicitly in the general references with which each chapter closes. Perhaps in some cases, however, the chapter references might well have been supplemented by explicit textual reference or footnote. Of this, however, doubtless the author is a better judge than the reviewer. The treatment of transfer of training is a case in point. E. D. RANDOLPH.

JOHN ANTHONY O'BRIEN. *Silent Reading, with Special Reference to Methods for Developing Speed.* New York: The Macmillan Company, 1921. 289 pages.

In the introduction the author deals with the modification of the ancient methods of teaching the mechanics of reading which modern investigations have entailed: Psychological investigation which shows that reading proceeds not by the alphabetical method but by the grasp of word-, phrase-, and sentence-wholes; physiological investigation of eye movements; social investigation of the relative values of oral and silent reading—and the detrimental influence of the former upon the latter—and concludes that the emphasis must be shifted from oral to silent reading in the schools.

The bulk of the book is occupied with the setting up of a satisfactory technique for the teaching of rapid silent reading. In the course of this the following topics are dealt with: (1) the factors affecting the development of speed in silent reading; (2) their formulation into types of training; (3) the results of the application of such methods; (4) the interpretation of the results; (5) the effect upon the motor behavior of the eyes; and (6) the conclusions.

The text is illustrated with valuable tables and the author keeps in mind throughout that interest is as essential for efficiency as practice.

EDITH A. WATERFALL.

EDWIN ARTHUR TURNER. *The Essentials of Good Teaching.* Introduction by Lotus D. Coffman. New York: D. C. Heath & Co., 1921. 271 pages.

The author's preface in which he stresses the importance of self-direction, when guided by a knowledge of the basic principles of good teaching, as a means of producing improvements in the art of teaching, and the editor's introduction give very clearly the point of view from which the book is written. It is the report of the work of a practical, successful educator who has an intimate knowledge of the problems and practices of the class room and will be beneficial not only to those who are training men and women for teaching but also to teachers in service.

The book is well adapted to students in training institutions who have had an opportunity to observe the various class room activities in the model school and are ready to begin responsible room teaching. The author gathers up many of the activities which are included in good teaching and attempts to develop certain general principles which will illuminate these practices. To the inexperienced teacher who is teaching her first school it will be particularly valuable. Such conditions as can ordinarily be provided in a training school very rarely approximate those that are typical of the public schools. The help and support of critic teacher and supervisor are not often supplemented by the counsel and advice of principal and superintendent. The Essentials of Good Teaching provides an excellent handbook and should be one of the first selected for the beginner's professional library. It will not only give him broad general principles to direct his in the working out of his problems but will also encourage his professional growth and broaden his vision of the work he has undertaken.

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INCLUDING TEACHER TRAINING

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RELATION OF COLLEGE DEPARTMENTS OF EDUCATION TO STATE AND LOCAL SCHOOL SYSTEMS[1]

GEORGE D. STRAYER

Professor of Educational Administration, Teachers College, Columbia University

Cooperation between college and university departments of education and state and local school systems is essential to the highest development both in the training of teachers and in the actual practice of teaching and the administration of schools. No satisfactory training can be offered without first hand contact with schools as they are commonly organized. State and local school systems can to advantage utilize the services of college and university departments of education in the solution of the professional problems which confront them. There is still need for emphasis with respect to the dependence of departments of education upon close contact with schools. A small practice school with eight or ten students in training appearing in each classroom every day cannot possibly provide adequate training in the art of teaching for the students of a teachers college or university. Any attempt to prepare people for teaching, for the supervision, or for the administration of schools out of relation to state and local school systems must of necessity result in mal-adjustment if not in malpractice upon the part of those who are sent out from our college and university departments of education.

In order that sufficient opportunity may be provided for students in training, it is essential that the department of education guarantee the results of its students. This involves careful supervision of all students in training who are brought into contact with the school system. Very careful preparation must be made before the field work is undertaken. Close and practically constant supervision must be provided in order that the schools shall not suffer from the mistakes of the uninitiated. If at any time the student in training shows so little skill as to suggest failure it is the duty of the school of education supervisor to take charge of the situation and to make good any deficiency upon the part of the student. The technique of education cannot be mastered apart from actual practice in the field any more than the technique of surgery can be acquired in the absence of patients to be operated upon. The job of the educational supervisor is quite like that of the surgeon in charge in that both must protect the person practiced upon.

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[1] This paper was read at the Chicago meeting of the College Teachers of Education.

It is not difficult to provide for the type of practice which is needed in the training of teachers. It is relatively more difficult as the training becomes more far-reaching in its significance in the preparation of supervisors, administrators, and investigators. The criteria that had been suggested for practice teaching applies with equal force here. If supervisors are to be actually prepared for their work, it is important that they should be given an opportunity to do a real supervisory job. Such opportunities can be provided only when the plan has been most carefully prepared and scrutinized by one who is competent to tell ahead of time of its availability. In like manner, those who work in the field of administration and organization of schools may not hope to develop the technique which should characterize the professional worker in these fields unless they have actually solved the problems which confront those who occupy these professional offices. But it is not conceivable that in the state or in the local school system the practitioner should be permitted to learn the technique of his profession at the expense of the school system in which he gets his training. Wherever such work is undertaken the college or university school of education must be in position to follow in detail every part of the enterprise undertaken for the sake of training students and must of necessity accept complete responsibility for the reliability of the results.

From such experience as the writer has had it would seem that there is no dearth of opportunity for practice such as has been suggested with the type of guarantee which has been proposed. Requests for service will inevitably come to any college or university department or school that has been able to give satisfactory results through the work of its students and faculty. As illustrations of the type of call that comes to the school of education I would list the following that have been brought to me personally, or which have been proposed to my colleagues:

Problems of teaching, involving the study of methods employed with a view to improving the results achieved; problems of supervision with the confident expectation that the efficiency of teachers might be increased through the methods which were employed; problems of administration ranging through practically the whole field, such as the classification of children, the fiscal administration of schools, including cost accounting, budget making, salaries and salary schedules, the distribution of state school funds, the development of adequate systems of taxation, and the like; the development of building programs; studies of equipment to be provided; the setting up of an adequate attendance service; the methods of handling school publicity; the installation of an adequate system of records and reports; the development of a set of rules for the board of education; the revision of the sections of city charters dealing with education; the codification of state laws for education; the development of an adequate health service; the reorganization of curricula for the training of teachers; the organization of a rural community in relation to a modern rural school; and the like.

I think it is safe to say that practically every major problem of teaching, supervision, and administration is brought to the attention of all college and university departments of education during any one year. The difficulty has not been, I take it, that men in the field have not desired the cooperation and assistance of the college and university. It has been rather that the schools and departments of education have not been sufficiently staffed to provide the type of service which they would be willing to guarantee, and that they have on this account been forced to limit the service which they otherwise would gladly have rendered.

In any well organized school or department of education research is being undertaken. Whether the work that is carried on is organized under a bureau or institute of research, or is carried on as a function of those members of the staff responsible for the direction of candidates for the doctor's degree, it must in a majority of the cases involve first hand contacts with state and local school systems. Even where the experimental school is most adequately developed the results of investigation must be checked in other schools if they are to be accepted as valid by those who work under ordinary conditions. As the consulting service which the school of education should offer is developed there will come to be more and more requests for this sort of cooperation. Every time a member of the staff of the school of education goes into a community and helps in the solution of a teaching, supervisory, or administrative problem he has established in the minds of those responsible for the schools the desirability of utilizing the special and expert service which the college or university has to offer.

It may be suggested that our larger school systems will develop their own research bureaus to a point that will make it unnecessary to call upon the university for this type of service. This does not seem to me probable in the very near future. If the school of education takes seriously its obligation to serve not only through the training of its students, but in the investigation and solution of problems confronting the profession, it can and will be developed to a point where the specialization of its faculty will permit of a type of service not likely to be found even in the larger cities. I am persuaded that in any of our state universities it should be possible within the next ten or fifteen years to develop in our schools of education a type of service comparable to that rendered by the agriculture college and the experimental station connected with them. The service which they have to offer should be equally available for the large and for the small community.

As the service which the university and college can offer in this field comes to be acknowledged, because of its demonstrated worth, it will be possible, I believe, to provide for a part of the support of the university department on account of the service which is rendered. I think I am not too hopeful in proposing that schools of education may eventually make an appeal to the legislature comparable to that of the school of agriculture. I know that there are many communities who are willing to pay for such service as has been made available.

In the organization of the practice teaching, survey, and research work of the school of education it will be advisable, I believe, to involve all of the members of the department or school of education in this part of the work. They should all have the first-hand contact with the field. Even a man who is responsible for the teaching of the philosophy of education will need to check up his theories of education with the actual practice of teachers and with the present day organization and administration of schools. Such an organization will necessitate a lighter teaching load. It will, as well, make it advantageous to provide that in many of the courses offered two or more members of the staff participate so that it may be possible at any time to have one of them absent for a period of a week or two on field work, while the other teaches the class. It will be necessary, as well, if the work is to be made most significant, to provide that students may be absent for an equal length of time in order to do consecutive work in the field, rather than merely spend an occasional hour in contact with these major professional problems. Much of the time in certain of the courses will of necessity come to center around the solution of the problems that are found in the schools. It is only by means of such experience that we can hope to give any very great appreciation of the principles which we seek to establish, or of the technique which we believe to be sound, or of the methods of investigation which we would have our students master.

It is interesting to note that the type of relationship which I have advocated is that which is becoming to be found more and more commonly in engineering schools. It has long been the established practice in schools of medicine. If we are to furnish the type of professional training, or to render the quality of professional service which is demanded of us, our schools of education must establish a closer and more constant contact with the schools which they are designed to serve. We need have no fear, I think, with regard to the welcome which we will receive, or the degree of cooperation which we will be able to secure from those charged with the responsibility of administering our schools.

THE RECIPROCAL RELATION BETWEEN THEORY AND PRACTICE IN SCIENTIFIC SECONDARY EDUCATION

J. A. CLEMENT

Northwestern University

It is more or less disturbing that very frequently it is assumed by speakers and writers that theory and practice in education are diametrically opposed to each other. On the basis of such an assumption, it is impossible for two individuals, one believing in mere traditional and opinionated theory, and another believing in mere random practice, ever to come to a satisfactory educational compromise. Sometimes public school administrators have been inclined to overestimate the virtue of unstandardized practice. Such a view-point is perhaps very largely due to the fact that superintendents, principals, supervisors and other administrative officers are practically overwhelmed by the number of routine problems demanding immediate solution within their schools. These diurnal problems are so numerous that high school officers scarcely find time to reflect upon educational principles in a consecutive and continuous, and scientific manner.

A somewhat similar attitude of mind is taken by many individuals who compose boards of education, and also by many patrons who are not represented on boards of education. Their attitudes are due, in part, to the fact that the most pressing problem for them is, first, how to finance and support secondary schools, and, secondly, due, in part, to their interest in seeing comparatively immediate, and, relatively specific outcomes result from four or six or more years of schooling given to pupils. There is, then, in such groups as these indicated, laymembers and patrons, sometimes, an ultra-radical belief in unorganized practice, because they have never found either time or inclination, or both perhaps, to make any analysis of underlying principles which constitute theory. It requires both time and training in order to develop wholesome school attitudes.

On the other hand, those persons engaged in higher education in the colleges and universities, private and public, often have a tendency to overemphasize the virtue of theoretical tenets, some of which have not always been proved out sufficiently either in length of time, or under a sufficiently wide variety of conditions. Many persons engaged in higher education have never participated in the active work of the secondary schools and so are unable to appreciate the great variety of especially petty details which face the secondary school administrator. Then, too, others engaged at present in higher education have been away long enough from these sub- or pre-higher educational problems so as to become unconscious of the real needs, individual and community, represented in these institutions whose purpose is to give training preliminary to colleges and universities, or, whose purpose is to give training preliminary to other phases of post-secondary-school experience. It is obvious that there can be little school progress wherever any group believes in mere opinionated theory alone, and another group believes in mere trial-and-error practice alone. It is essential that all groups recognize such correlations, or reciprocal relations as do exist between theory and practice in education. For in the educative process as in all other domains of human experience there is evidence of reciprocal relations between principles and practices.

One appropriate means for discovering an educational compromise between the two above mentioned groups representing opposing attitudes is to be found in the departments and schools of education of the higher institutions of learning in this country. It is the business of such departments to become clearing houses, and to attempt to show that sometimes educational theory has influenced practice fundamentally, and, that sometimes educational practice has in the past and may in the future affect educational theory. It is really of little value to raise the question in the hen-and-egg-form as to which precedes, perfected theory or perfected practice. It is futile to assume that either theory or practice is ever perfected up to the limit, covering an extended period of time. What we have is rather a revised edition of interrelated theory and practice from one generation, or century or more to another. Not all practice is important enough to be embodied in later theory. But there is likely to be within every quarter of a century, more or less, some practice which is important enough to be included in the theory of the following quarter of a century. This is so clearly demonstrated in the history of philosophy; in the history of science, physical, biological and social; and in the history of religion, that it may be regarded as an axiom in human experience. The tendency of present day historians of education to stress more than previously the functional aspects is large evidence of their recognition of a reciprocal relation, rather than a diametrical opposition, between educational theory and practice. Three histories of education stressing this functional aspect have been written during the last decade. These books already have done valuable service.

In recent years we have recognized that the attitudes which secondary school pupils hold toward certain high school subjects have a great deal to do with their achievements in these subjects. These attitudes of pupils are due to a number of influences not relevant for discussion in detail at this juncture. Analogously, it is true that the educational progress in the secondary schools of this country will be determined in a large way through the attitudes taken by school officers, and citizens toward the problems involved. The more scientific-minded the people become in the solution of school problems the greater will our progress be. It is, therefore, the business of the educational theorist whether he be found within the departments and schools of education in the higher institutions of learning, or whether he be found in the academic departments of higher institutions teaching the subjects which will later in turn be taught by college specialists in the high schools, to study the specific demands and problems of secondary schools as they now exist. In this way it will be possible to revise fossilized theory, and to standardize practice.

Furthermore, it is the business of the secondary school administrators to acquaint themselves with all of the influences, philosophical, scientific, literary, that have in any way modified practice from one generation to another.. The more of philosophic temper, the more of scientific method, the more of historic-mindedness, the more of literary appreciation, and the more of poetic insight the administrator possesses the better. But, too, he should add to this fund of knowledge just as much as is possible from those fields which furnish us with direct professional guidance in the province of secondary education, namely from the fields of biology, psychology, and sociology. It is futile to attempt to meet the present day problems in reorganizing secondary education unless in some way we can develop a vitalizing secondary school consciousness, and a dynamic attitude of mind among all groups of people involved. It is *not* a question of *theory versus practice, but* a question of correlated *theory and practice* in secondary education that it is important for us to recognize at the present time.

It is profitable for school officers to observe in great detail what has happened in agriculture, in medicine, in aeronautics, for example. There has been, and, is yet, a good deal of unscientific farming done in all countries including our own. The majority of people engaged in farming now, look with misgivings upon the possibility of the establishment of a scientific farm-theory and farm-management. But a mere enumeration of the courses offered in agricultural colleges is some indication of a different attitude taken now-a-days by specialists in agriculture toward crop raising, and, stock-breeding from that of a quarter of a century ago. Courses in chemistry of soils have modified actual practice in crop-raising. But also experimentation under different soil conditions has modified and revised original theory in many instances. Likewise, medical theories concerning the treatment of various diseases have changed rapidly from generation to generation. Shell-shock patients were not known about until certain war conditions existed. Clinical experimentation, however costly it may be at times, in many ways, has assisted in clarifying further theory in medicine. Improvements made in air-plane travel or other methods of transportation together with improvements in agriculture and medicine are all clearly evidences of the interdependence of theory and experimentation rather than any opposition between them. Whatever can be argued in favor of the physical world on this interrelation and interdependence of principles and practices can with some vigor and confidence be argued for secondary school situations involving principles and practices relative to the mental, moral, and social life of pupils.

One can trace out the history of secondary school practice from ancient to modern times with considerable profit. Plato's intellectual sieve proved to be too idealistic for his own day as well as for ours, but at any rate, as an educational theorist, he suggested some problems similar to those of our own day. Most of the theories of Quintilian, of Milton, of Comenius, and of Rousseau respectively did not function in practice in their corresponding countries, but here and there through theory itself practice was revised, and again through established schools of one sort and another, later theory was modified. It is clear that covering a span of years representing a generation or more, theory and practice were never wholly isolated or demarcated. One has always supplemented and complemented the other at some point, and at some time. A great waste has been involved, however, whenever practice has not been carried on under experimentally controlled conditions.

The best secondary school theory is really the embodiment in the form of principles of the most successful practice covering a period of years sufficiently long, and involving conditions varied enough to be representative of a complex modern community. Or stated the other way round the best secondary school practice is that based upon a body of well-tested principles through a long period of time. One disadvantage in attempting to evolve a body of principles out of uncontrolled practice, or out of widely varying practices under always varying conditions is that it is wasteful in point of time. The best means of testing scientific secondary school principles is to carry on certain experimentations under well controlled conditions under the auspices of experts who are capable of making analyses of human reactions and experiences. Two types of schools illustrative of such work may be mentioned for example, in connection with Columbia University in New York City, and also in connection with the laboratory school of the University of Chicago. A number of state universities are attempting to do very similar work in psychological and educational clinics. In order that the most rapid progress be made there ought to be at least a dozen or more additional experimental and laboratory schools organized for the precise purpose of trying out principles to be used in secondary school practice. This sort of work is valuable because it is done under much more controlled conditions than can be found in the usual public high school situation It is, possible to repeat certain experiments under unifom conditions if desired. It is also feasible to continue an experiment over a period of one, two, three or four years or more. In this way it is possible to try out certain types of organization, certain kinds of subject matter or content, certain methods of teaching and of administration. A dozen or even a score of such experimental and laboratory schools well supported financially over a period of years with experts in control would do more to formulate a sound body of secondary school theory than any previous movement in the history of American education. Such experimental practice would test more readily than any other procedure could do our present theories, and consequently greatly accelerate our progress in secondary education during the first half of the twentieth century.

The practice schools organized in the normal schools and colleges of the country have attempted to clarify some of the problems relative to class room teaching. The value of the work done in this connection should not be underestimated. But it is evident that in many instances it is all but impossible to carry on any scientific experimentation in class room work under present conditions. So many of the practice teachers are inexperienced that little scientific progress is usually made during one semester of teaching. What should be done in the practice schools would be to map out specific projects to be worked out by critic leaders and practice teachers covering one semester or more, devoting their energy to a limited problem in a much more intensive form than has usually been done. This might be characterized as problems in teaching as is now done in some courses offered in education departments.

In the meantime, however, a great deal of valuable work can be carried on within the public high schools themselves wherever the heads of these schools and their cooperating corps of officers are thoroughly trained in the spirit of such experimental schools as above mentioned. They could be trained to see and foresee numerous school problems involved in respective communities throughout the differently situated states. A great many quite near-successful practices go out unrecorded with each school generation of teachers every three or four years, or more. What is needed very much at the present time is a very wide collection and sampling of successful practices relative to school organization, relative to the proportionate distribution of vocational and academic content in the curriculum, relative to the matter of the best manner of conducting supervised study, relative to the matter of the best plan of physical education, relative to the matter of how best to increase revenues for financial support, relative to the matter of what precise provision is being made for retards and accelerates when once they or any other group of secondary school pupils have been given psychological or intelligence tests, relative to the matter of the best score card to be used for measuring the efficiency of teachers. Every one will look with interest upon the work of the city of Los Angeles which has provided recently for a director of research in secondary education. With such guidance provided, school systems themselves can become more and more laboratory centers for clarifying secondary school theory and practice. Nothing can do more to clarify present day educational *theory and practice* than a great array of specifically gathered and pragmatically tested facts through one or the other of the above means suggested.

The collection of new materials in junior high school instruction as found in the twentieth year book is one phase of this whole problem of the relation of theory and practice. Committees representing the National Educational Association and committees representing the North Central Association have rendered valuable service hitherto, and should be continued in order to make further findings and recommendations. The National Society for the Study of Education, the Practice Teachers' Association reorganized a year ago, the College Teachers of Education, conjointly with present-day high school principals should set for themselves a large list of specific problems on the side of actual practice and attempt to add considerable to whatever is now available on the side of specific problems relative to secondary school practice. The more specific the problems are which are being investigated, the better. The greater the amount of experimentation and of laboratory testing possible the more profitable will the outcome be. The longer the period of time covered in an investigation and experimentation the surer results will be. The greater the number of individuals working reliably on these committees representing both secondary school administrators and college instructors especially in education departments, the more rapidly will scientific-mindedness in secondary education leaven the whole group.

SOME RECURRING PROBLEMS OF ADMINISTRATION

H. C. PRYOR

Dean of the Senior College, Northern Normal and Industrial School,
Aberdeen, S. D.

The questions, "How many hours should students be permitted to carry?" "How late should they be permitted to enter?" "Should they be permitted to register for courses in residence and complete them *in absentia?*" have been particularly vexing. In order to get some light on the questions the following questionnaire was sent to the registrars of 38 teacher training institutions, in different parts of the United States, offering work of college grade leading to the A. B. degree in education.

Dear Sir:

Will you please fill out and send us the following questionnaire? We wish to use it in connection with reorganization of our catalog material for next year.

1. What is the minimum number of hours which students may carry? .... Maximum?........................

2. Do you permit exceptionally capable students to carry more than the maximum number of hours?......................... If so, under what conditions?..........................

3. How late in the $\left\{\begin{matrix}\text{quarter}\\ \text{semester.}\end{matrix}\right\}$ may students add new courses?

How late may courses be dropped?....................................

4. What is your regulation regarding the number of hours which may be carried by students who register late?....................................

5. Do you permit students to register for courses in residence and complete them in absentia?.............................. If so, under what conditions?..

Answers have been received from twenty different institutions and summarized. The material is presented for publication in the hope that it will prove helpful in developing standards not only to those who contributed to the study but to others who may not have had an opportunity to help. Appreciation for assistance is hereby gratefully acknowledged.

WHAT IS THE MINIMUM NUMBER OF HOURS WHICH STUDENTS MAY CARRY?

The minimum number of hours which students are permitted to carry ranges all the way from eight in the case of one institution, to 20 in the case of two others. A few institutions set no particular minimum. The *median* number of hours—this is the figure in which we are most interested, is 16 plus.

THE MAXIMUM?

The maximum number of hours permitted in the different institutions ranges from 10 in the case of the lowest to 32 in the case of the one permitting the highest number of hours. The *median* is 24.

DO YOU PERMIT EXCEPTIONALLY CAPABLE STUDENTS TO CARRY MORE THAN THE MAXIMUM NUMBER OF HOURS? IF SO UNDER WHAT CONDITIONS?

The answers to this question may be summarized as follows:

"No"—(Unqualified)	6
"No"—Except under special conditions such as "Average 90 or above," "Honor students," "High School valedictorians."	3
"Yes"	10

The reasons given in this case vary a great deal. They run somewhat as follows:

"Must pass extra hour test."
"Seniors with very good grades."
"Averages of 95 and no failures."
"Approval of Deans."
"High grades in this or other colleges."
"Exceptional ability the preceding term."
"One hour if needed for graduation and record is good."

HOW LATE IN THE QUARTER, OR SEMESTER MAY NEW COURSES BE ADDED?

The answers to the question show that the general practice is to permit no additions later than the third week of the quarter or semester. One school permits additions as late as the fifth week *in the quarter*, and two as late as the sixth week *in the semester*.

HOW LATE MAY COURSES BE DROPPED?

In answer to this question, eight institutions report "any time in the quarter." Most of the others report that work may be dropped within a certain time, generally not later than the sixth week, if sufficiently good reasons are given.

WHAT IS YOUR REGULATION REGARDING THE NUMBER OF HOURS WHICH MAY BE CARRIED BY STUDENTS WHO REGISTER LATE?

Regulations regarding this matter vary widely so that it is almost impossible to make any very definite statement. Out of the answers given this much may be gleaned: students who register late are not permitted to carry as much work as those who register at the regular time. In some institutions each case is treated individually. In one it is left to the Dean to decide. The most common practice,—this in only six institutions is to decrease proportionately the number of hours for which a student may register late. To be concrete, this would mean, in the case of institutions operating on the term plan, reducing the student's load about 1½ hours for every week late, in registering. Under the semester plan of organization the students load would be reduced about 1 hour for each week he is late.

DO YOU PERMIT STUDENTS TO REGISTER FOR COURSES IN RESIDENCE AND COMPLETE THEM IN ABSENTIA? IF SO, UNDER WHAT CONDITIONS?

There is much more unanimity of opinion in this matter. *Fourteen institutions* answered with an unqualified "No." The other six answered "Yes" with certain limitations such as "for exceptional reasons by correspondence," "illness," "unavoidable absence," "by correspondence with permission of the President," and "part credit allowed."

It would seem that the following guiding principles might fairly be deduced from the practices revealed in this investigation.

1. The minimum number of hours for regular students should be sixteen.
2. The maximum number of hours permitted for regular students might be put at twenty.
3. Exceptional students, *i.e.*, those whose work averages B or above, 86 to 93 in this school, may be permitted, occasionally, to carry more than 20 hours of work. This should be only in very exceptional cases.
4. Students should not be permitted to change their program later

than the third week in the quarter and in this case the course added should be shorter than the one dropped. That is, a 4-hour course might be substituted for a 5-hour course, or a 3-hour course for a 4-hour course, etc.

5. The majority of the institutions answering the questionnaire have practically no limitations so far as the time a course may be dropped is concerned. This does not seem to be good general practice although it may be permitted for very exceptional reasons.

6. Students who register late should not be permitted to carry as much work as those who register at the beginning of the quarter. In accordance with the common practice the amount permitted should be reduced by about 1 or 1½ hours for every week a student is late, depending on whether the school is organized on the semester or term plan.

7. Students should not be permitted to begin courses in residence (which has been done frequently during summer quarter) and complete them in absentia unless the reasons for doing so are very exceptional. Perhaps no student should be permitted to make arrangements in advance for this kind of work.

The writer submits the material for what it is worth. Information regarding the current practice is invited.

A SAMPLE OF CITIZENSHIP TEACHING IN THE SIXTH GRADE

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That the teaching of citizenship is a very important part of the work of every school seems now to be a generally accepted conclusion. There is, however, no general agreement either upon the detailed subject matter or upon the way in which it shall be taught. This paper will merely attempt to give an idea of the material and the method used in the sixth grade at Horace Mann School this year, with the three teachers of the grade closely cooperating. We believe that there is material for citizenship in many of the situations of the class room, in most of the subjects of the curriculum; in fact, in all the activities of the school. But we believe also that this material is the more effectively used the less it is separated from the situations in which it naturally develops. Hence we seek to find such material and use it as we study and as we live rather than to plan out in advance a given course of lessons.

Due to the fact that we have a fixed program, we find that, unless we set aside a definite period in which to discuss, plan, and carry out a given piece of work, that work will probably not be carried out. For that reason we have a definite place for citizenship on our program.

We started this year with the aim of making the pupils more conscious of the habits and attitudes desirable for good citizenship, and of the principles underlying these habits. Our purpose in this was to stimulate the children to improve the qualities that make for their citizenship. We wanted our pupils to realize that we live in a democratic situation; how that fact makes it necessary for us to be cooperative, helpful, and self controlled; that we are largely responsible for the kind of world in which we are to live; that together we make the laws, select those who are to carry them out, and become responsible for seeing that they are well carried out. We try constantly to set such actual standards of good citizenship as are enumerated later in this paper.

One period of thirty minutes a week was set aside as a civics period for each of the three sixth grade classes. Four twenty minute periods a month were reserved for meetings of the Civic League and Cabinet. In other words, civics was taught through two agencies; first, the weekly lesson in civics; second, by means of an organization known as the Civic League to which all the members of the sixth grade belonged. Since the aim of this organization was to help the school, representatives from each of the fourth and fifth grade classes were invited. These delegates attended the meetings and took back reports to their own class rooms.

At the first meeting of each class we discussed the question of good citizenship in general, what it means, why it was especially necessary to be good citizens now, and the chief characteristics of a good citizen. It was decided that to be a good citizen a boy or girl must be honest, courteous, self-controlled, helpful, obedient, loyal, and healthy.

As it has been the custom for several years for the sixth grade to have a Civic League, this class was eager to have one also. When we met for organization the children were asked why they wished to have a League. They decided they wanted to have one in order to help themselves and to help Horace Mann School. Confronted with the question as to what was to be done this morning, some said elect a president, others said elect officers, and finally one child gave the suggestion for which the teacher was hoping; that is, that we should plan our League first. Soon we agreed that some such step was necessary. Two other suggestions followed almost immediately; one to the effect that such a plan would mean a set of laws, and the other that such a set of laws would be called a constitution. We decided to see what help we could get from the Constitution of the United States and from that of the League of last year. These furnished material for our next Civics recitation, at which time parts of the United States Constitution were read and discussed, the preamble was noted, and a study made of the constitution framed by the class of last year. As a result of this recitation the children learned the meaning of preamble, learned what a constitution really is, by whom it is made, what form it generally takes, and how it may be changed if it is not satisfactory. At the next meeting the League decided to adopt the constitution of the previous League and if it were found to be inadequate to amend it to suit the needs of this class.

In much the same way "subject matter" for the civics lesson often grew out of the work of the League. At other times matters for consideration of the league grew out of the class room discussions.

The cabinet composed of the president, vice president, secretary, and treasurer, and a delegate from each of the three class rooms met before each session of the League and planned the program of the next meeting of the League. Suggestions from the members of the cabinet, from the teacher in charge, or from any officer or teacher of the school were gladly received by the cabinet, discussed, and put in shape to be presented to the League. The principal of the school frequently requested the League to take charge of some activity that called for the cooperation of all the grades, and necessitated making speeches in each room, collecting a weekly donation to charity, selling tickets, or the like.

Since all the work of the year cannot be discussed in detail here, the general nature of it will be suggested and a few typical lessons and meetings described.

The work easily groups around three heads; (1), the qualities necessary for citizenship; (2), ways in which the League can be of service to the school; (3,) matters having to do with the organization and conduct of the League.

Under the first head, qualities necessary for citizenship, may be mentioned a lesson in which we first reviewed the qualities that make for good citizenship, following which each pupil studied himself to see in what qualities he was weakest. Each pupil determined to try for one month to see what he could do to improve just one quality. At the end of that time each pupil wrote a personal letter to the teacher in charge telling her what he thought he had accomplished. Some thought they had succeeded, others that they had not, and still others that they had improved a little but were going to keep working. A letter typical of those received follows:

Nov. 11, 1920,
Horace Mann School,
New York City.

Dear Miss M——,

My improvement was to be in self control. At home my little brother who is six and a half years old is very aggravating and sometimes I have hard work in keeping my self control. I think that I have now conquered this giant and am now going to work on a new one. This new one is to take more interest in the class work. By this I mean to pay more attention and have more suggestions to make. This is going to be a good big giant to conquer but I will do it.

Love from your pupil,
E—— E——.

Several lessons grew out of the fact that the principal suggested to the entire school that he was disappointed in their conduct during a moving picture talk which was given in chapel. He suggested that in the elementary school the Civic League plan to do something about it. Representatives of the League met with representatives of the high school organization and decided to conduct a "Courtesy Campaign" throughout the school. All three sixth grade classes worked on a slogan finally adopting the following:

Courtesy of manner,
Courtesy of speech,
Courtesy to everyone,
Courtesy to each.

Different members of the League made speeches in the various class rooms of the elementary school asking for cooperation in making our school more courteous. These members also put the slogan on each blackboard throughout the elementary school. In the art class courtesy posters were made for use in the high school.

The second group, ways in which the League could be of service to the school, furnished much material for League meetings. It had been the custom for the Civic League to relieve the teachers of hall duty at recesses, to act as ushers in chapel, and to assist in the lunch room. We accepted these responsibilities also. It was necessary to plan how monitors should be selected, what qualities of citizenship they should possess, and how long they should serve. Their selection was finally put into the hands of a committee. This committee met twice a month and carefully selected pupils to be stationed at prominent places between the outside doors and the class rooms to see that the simple rules of order were maintained. The lunch room helpers and ushers were selected in the same manner. On the whole the children of the school respected the authority of the monitors and the teachers appreciated the relief from a tiresome duty.

Much activity upon the part of the League was occasioned by the fact that it was asked to conduct a campaign for the Manhattanville Day Nursery, a charity to which the school had regularly contributed. This involved much planning in advance. As the money was to be collected in folders, these had to be obtained, counted, and distributed. A record also had to be kept. A number of children were selected to make speeches in the various rooms in order to arouse interest and enthusiasm. Collecting, checking, and counting folders completed their work.

A typical lesson in the third group, matters having to do with the organization and conduct of the League, was the setting up of standards for our officers. What qualities were necessary for the person selected as president? How should his qualifications differ from those of the one selected as secretary? The children pointed out that the president must be a leader, must be able to express himself well, be dignified, and that he must have a keen sense of responsibility. The secretary, on the other hand, must be able to write legibly and well, and spell correctly. They stressed the fact that the treasurer must be strictly trustworthy and that he must "be good in arithmetic." After much discussion as to our attitude toward voting it was decided to vote for the one best suited for the position regardless of personal friendships. It is, of course, doubtful if each individual lived up to that ideal. Each pupil wrote a statement of his views in the matter. The following will suggest the type.

Civics

I think that the kind of officers we should have are those children who have the following good points:

They should be trustworthy.

They should know how to handle business.

They should be gentle and courteous to everyone.

They should be able to pronounce clearly when speaking to an audience, and know what they are going to say.

They should be bright and not afraid to work.

The way to vote is to consider everyone, and the child who measures up best to these qualities is the one to be voted for.

It is not wise to vote for your friends.

E—— M——.

Nov. 3, 1920.

Elections of officers have been conducted in different ways. At least once nominations were made by petition and officers selected by the Australian ballot system. Usually, however, the president called for nominations from the floor with the understanding that each member who placed a nominee before the group should make a nomination speech.

The children were at all times encouraged to bring up, either in the class or in the League, matters which they thought should be considered by the group. On one occasion a very capable president of the League and one who was usually a very good citizen was reprimanded by a vote of the League because he had been one of a group to disobey a rule of the school. He was told that as their president he should have set a better example. That there might be no lack of dignity in the proceedings the teacher was asked to preside during that part of the program. A motion to condone the president's offence this time and give him another chance was made and passed. The president expressed his regret and thanked the League for giving him another chance.

On another occasion a room delegate was given an opportunity to resign because he had failed, after repeated warnings, to conduct himself as the class thought it had a right to expect of its delegate.

In addition to the three lines of work indicated, a few lessons developed from the work in history, one of these being a study of Abraham Lincoln as a citizen. Another was a study of the oath taken by the Athenian boy upon entering the army. The lines, "We will transmit this city not only not less, but greater, better, and more beautiful than it was transmitted to us," suggested our common community interests and our responsibility to our city. This afforded material for several lessons.

The fact that we have a definite time for this work has not kept us from stressing citizenship in other lessons or at other times. Neither must it be thought that all disciplinary matters were brought up in the League or civics class. There were many matters which the individual teacher handled privately.

We realize that we have not settled the question as to the way in which citizenship shall be taught, but we do feel that we have taken a step in a direction which has proved profitable for us.

THE DISTRIBUTION OF TIME OF STUDENT-TEACHERS IN A STATE TEACHERS COLLEGE

T. H. SCHUTTE

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This study was prompted primarily by the fact that the director desired to gain an idea (1) as to how student-teachers spend the time set aside for practice teaching, and (2) how the time demanded by practice teaching compared with the time spent for a unit of credit in other subjects. Such knowledge would clearly be useful to the director and supervisors in their work in organizing and directing practice teaching.

It was decided to make a study of a considerable number of student-teachers for a brief period of time after they were well started in their work for the term. A time record was accordingly kept for a period of only two weeks (10 school days). The study for this short period of time doubtless could not produce results as valuable as if it had been extended over a period of say 12 to 18 weeks; but, nevertheless, it is believed to be fairly representative of the conditions in the particular institution studied.

In this investigation, the blank arranged by Dr. W. S. Gray, Dean of the College of Education, University of Chicago, was used. The blank with the directions for use is here reproduced.

DIRECTIONS FOR KEEPING A TIME-RECORD OF STUDENT TEACHING

1. Each time you work on any phase of your student teaching course, note the time in minutes. If you do three or four different things during a given day, keep an exact time-record of each. *Two cautions*: (1) Keep your record accurate and neat. (2) Be sure to include every type of activity which is a part of your student-teaching course.

2. Record the date in the left-hand column of the table and insert the number or numbers of minutes in the appropriate blank or blanks. In case the table does not contain a column for each activity which you undertake, make the entry to the right in a column. Put a letter at the head of a column and describe the activity on a dotted line in the key. Include under "M" only those miscellaneous tasks which recur very frequently.

3. At the end of each day add together the number of minutes

TIME RECORD OF STUDENT-TEACHER

Read carefully the directions on the opposite side of the sheet

Name.. **Subject**..

....
Supervising Teacher

Date	Days	O	T	I	L	S	P	Q	E	C	G	R	M			Total	
																Hrs.	Mins.
	M																
	Tu																
	W																
	Th																
	F																
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Total in minutes..	......																
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	S																
Total in minutes..	......																
Total for five weeks.........	Hrs.																
	Mins.																

O—Observation
T—Class teaching
I—Teaching individual pupils
L—Assisting in laboratory
S—Supervising study of pupils
P—Preparation of lesson plans

KEY—Q—Preparation of subject-matter taught by Supervisor
E—Grading papers
C—Individual conference with Supervisor
G—Group conference with Supervisor
R—Assigned professional reading
M—Miscellaneous

which appear in the records for that date and express the sum in the right-hand column of the table in terms of hours and minutes.

4. At the end of each week add together the number of minutes which appear in each column and express the sum in terms of minutes in the horizontal column of totals for that week.

5. At the end of 5 weeks add together the number of minutes which appear in the various totals of each column. Record the sum in terms of hours and minutes in the appropriate blanks at the foot of the table.

6. It is important that the time record be kept for at least ten weeks during a quarter. Beginning with the sixth week entries should be made on a second record blank.

In addition to keeping this record for a period of two weeks the students were asked to designate their hardest and easiest studies, noting in each case the amount of time devoted to these subjects daily, as in the case of practice teaching.

In this manner the time-record of 81 student-teachers was secured for three regular activities (phases of their work). The time spent daily in practice teaching, in the easiest subject, and in the hardest subject, is shown in the following table:

TABLE I.—TIME IN MINUTES SPENT DAILY BY STUDENT-TEACHERS

(*A*) Practice teaching.
  1. Range, 50 to 274 minutes.
  2. Median, 128 minutes.
  3. Mean, 132.15 minutes.
(*B*) Easiest Subject.
  1. Range, 50 to 120 minutes.
  2. Median, 69.7 minutes.
  3. Mean, 70.4 minutes.
(*C*) Hardest Subject.
  1. Range 60 to 166.5 minutes.
  2. Median, 105 minutes.
  3. Mean, 102.77 minutes.

In the above table a few significant facts stand out. Practice teaching makes a decidedly greater demand on a student's time than does any other subject. The range in practice teaching is from 50 to 274 minutes daily, while that for the easiest subject is from 50 to 120 minutes daily, and that for the hardest subject is from 60 to 166.5 minutes daily. It should be noted here that the lower limit of the range (50 minutes) in practice teaching is so low because of one or two very exceptional cases, a condition which does not hold true of the lower limits for the easiest and hardest subjects.

The median daily time for practice teaching (128 minutes) is higher by 58.3 minutes than the median daily time for the easiest subject, and higher by 23 minutes than for the hardest subject.

The mean daily time devoted to practice teaching is higher by 62.15 minutes than that for the easiest subject, and higher by 29.38 minutes than that for the hardest subject.

In no case did the easiest subject require more time than did practice teaching, while in only five cases did the hardest subject require more time than did practice teaching for this 10-day period.

These five cases were:

1. One person in teaching second grade reading and spelling required 845 minutes for practice teaching, and 870 minutes for sociology.
2. One person in teaching fourth grade language required 1300 minutes for practice teaching, and 1665 minutes for composition III.
3. One person in teaching sixth grade reading required 1100 minutes in practice teaching, and 1315 minutes in History III.
4. One person in teaching fifth grade arithmetic and geography required 855 minutes for practice teaching, and 901 minutes for advanced civics.
5. One person in teaching second grade arithmetic required 1055 minutes for practice teaching, and 1165 minutes for advanced civics.

It will perhaps be interesting to see what the 81 students whose coöperation provided the data of this study regarded as the points of relative ease and difficulty in their curricula. The following table exhibits the facts:

TABLE II.—SHOWING HOW THESE 81 STUDENTS ARE DISTRIBUTED IN THE VARIOUS COURSES

Course	Number of students	Number designating it as:	
		Easiest	Hardest
Domestic science	9	1	4
Teaching	81		
Household chem	7	1	4
Adv. civics	14	0	10
Draw. III	10	1	0
Sociol	32	2	30
Pl. gr. methods	32	1	0

TABLE II.—SHOWING HOW THESE 81 STUDENTS ARE DISTRIBUTED IN THE VARIOUS COURSES—*Continued*

Course	Number of students	Number designating it as:	
		Easiest	Hardest
Domestic art	7	3	1
Ktg. theory	22	9	0
Eng. lit.	12	6	0
Reading III	12	2	3
Children's lit.	18	7	3
Civic biol.	9	2	1
French	7	2	3
Pen'ship spell	5	1	0
Gram. III	1	0	0
Botany	1	1	0
Chemistry gen.	6	2	4
Drawing	11	11	0
Psychology	3	1	1
Music	8	0	2
Comp. III	9	1	3
Lit. & themes	13	4	1
Gen. hist.	4	2	1
Arith. III	4	1	1
Man. tr.	7	0	2
Geog. III	1	1	0
Hist. III	8	1	3
Trig.	1	0	1
Intro. to teach.	1	1	0
Theo. of educ.	1	1	0

The hardest and easiest subjects alluded to in Table II of course refer to subjects other than practice teaching. It is evident that the students rather uniformly think that sociology and advanced civics are their hardest subjects, while drawing, Kindergarten theory, English literature, and Children's literature are regarded as the easiest subjects. The above table may or may not indicate the general tendency in this matter. For definite conclusions further study should be made, here and elsewhere.

TABLE III.—SHOWING THE NUMBER OF MINUTES SPENT BY THESE 81 STUDENT-TEACHERS IN EACH TEACHING ACTIVITY, THE NUMBER OF PERSONS ENGAGED IN EACH ACTIVITY, THE AVERAGE NUMBER OF MINUTES SPENT DAILY IN EACH ACTIVITY, THE MEDIAN DAILY TIME SPENT IN EACH ACTIVITY, THE PER CENT OF THE TOTAL TEACHING TIME DEVOTED TO EACH ACTIVITY, AND THE PER CENT OF THE TOTAL TEACHING TIME DEVOTED BY THE PARTICIPANTS IN EACH ACTIVITY TO THAT PARTICULAR ACTIVITY

Activity	Time in minutes devoted to activity in 10 days	Number of persons engaged in activity	Average daily time spent by those engaged in the activity, minutes	Median daily time spent by those in the activity, minutes.	Per cent of total teaching time devoted to this activity	Per cent of time this activity required of the total teaching time of participants
O	3,147	33	9.54	6.5	2.97	6.7
T	30,194	81	37.275	31.5	28.2	28.2
I	1,235	14	8.82	5.5	1.1	5.6
L	1,687	11	15.34	10.5	1.5	10.8
S	3,149	19	16.57	15.0	2.9	11.6
P	37,543	77	48.76	43.0	35.0	35.0
Q	4,693	22	21.63	14.3	4.3	15.3
E	5,025	35	14.36	10.5	4.7	9.6
C	6,114	77	7.94	7.5	5.7	5.7
G	4,380	60	7.3	6.3	4.0	5.3
R	2,325	30	7.75	6.8	2.1	5.2
M	5,428	37	14.6	13.0	5.0	10.0
Monitorial duty.....	2,145	10	21.45	15.3	2.0	14.1

[1] In the cases of activity P and C the percentage in the last column is left unchanged because only four students did not participate in each case. This affects the percentage so little that a separate calculation was not made.

Table III should be read as follows:

To activity "O" (observation) 3147 minutes were devoted in the 10-day period by the entire group of 81 teachers; but only 33 student-teachers did work in observation; these 33 student-teachers devoted on an average 9.54 minutes daily to this activity; the median time devoted to this activity by the 33 student-teachers was 6.5 minutes daily; the 3147 minutes devoted to this activity is 2.97 per cent of the entire time devoted to practice teaching by the group of 81 student-teachers; and the 33 student-teachers participating in this activity devoted 6.7 per cent of their entire practice teaching time to this activity, etc.

Evidently class teaching and preparation of lesson plans take the greater amount of practice teaching time, requiring respectively 28.2 per cent and 35 per cent of the total time. The two activities together require 63.2 per cent of the entire time, leaving 36.8 per cent of the time to be distributed among the other activities. Individual and group conferences (C and G) together require 9.7 per cent of the time. Only 5 per cent of the time is devoted to miscellaneous duties, showing that the work of practice teachers is fairly well established in most cases; in fact, only 37 of the 81 student-teachers had any duties to be classed under the miscellaneous duties. Probably a rather excessive amount of time is devoted to monitorial work on the part of the ten students participating in this activity.

In general it is rather difficult to pass valid judgment as to the adequacy of the time distribution for these 81 student-teachers since, as yet, we have no standards established. However, this type of study should be continued so that a good over-view of the practice in this type of work may be had; thus valid standards may be obtained.

The study further shows that grade IV makes the heaviest demand on the students' time in practice teaching while the students' teaching drawing and music spend the smallest amount of time.

The mean number of minutes devoted to actual class teaching is by no means uniform for the different grades, ranging from 18.33 in grade IV to 60.6 in the Kindergarten. In grades III to VIII inclusive the mean number of minutes spent daily in preparation of lesson plans exceeds the mean daily time spent in teaching. Grade IV makes the heaviest demand on the students' time in preparation of lesson plans, and the lightest demand for class teaching.

In the Kindergarten one of the student-teachers reports no time spent in preparation of lesson plans, while in the special subjects, three report no time spent in this activity.

The mean daily time spent in individual conference with the supervisor ranges from 4.16 minutes in the Kindergarten to 10.98 minutes in grade VI. The range for group conference with the supervisor ranges from 4.45 minutes in grade VII to 12.5 minutes for the special subjects.

The mean daily time devoted to miscellaneous duties by those participating ranges from 6 minutes in grade 6 to 24. 9 minutes in the kindergarten.

The brief comparisons made merely indicate the type of knowledge we should have in order to deal most adequately with practice teaching. We should know quite definitely something about the amount of time required in practice teaching in the different subjects of the curriculum, etc. Suffice it to say that much investigation is needed along the lines indicated by this preliminary study so that the amount of credit granted for student-teaching, and the time distribution in student-teaching can be standardized.

ORGANIZING THE SUPERVISION OF HOME ECONOMICS PRACTICE TEACHING

AGNES TILSON

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GENERAL SURVEY OF CONDITIONS AND PRACTICE

Aims.—The aims of supervised practice teaching in home economics are the same as those for practice teaching in other subjects: (1) To protect the child, (2) To guide the teacher so that she can more effectively and economically take her place in the school room.

Anticipatory Plans.—In order to be the most economical of time and energy the supervisor should know the common weaknesses and difficulties of young, inexperienced teachers. The following list was given by 50 experienced home economics teachers and supervisors attending Teachers College, New York, in the summer of 1921.

1. Young teachers are deficient in the power to organize new subject matter, especially in complex subjects which are treated without a text book. They do not have a ready ability to distinguish between important and unimportant ideas and facts.

2. Young teachers are especially deficient in seeing clearly the aims and ideals of the home economics course as a whole. They have a tendency to be too much interested in the one line in which they specialized—foods, clothing, etc.

3. If a text book is used, young teachers are accustomed to run too rapidly over the main topics of the text. They fail to realize drill is necessary to master the subject matter.

4. Young teachers often fail to keep up steady class attention during recitation. They often become interested in an individual and lose sight of and control of the class.

5. Young teachers do not show judgment in giving and withholding help. They are especially likely to give too much time to a laboratory problem in which they are interested.

6. Young teachers often fail to make the important points in the lesson stand out definitely and clearly. After interesting discussions the pupils are not able to sum up the work and give a clear statement of decisions.

7. Young teachers often both talk too much and use a vocabulary beyond their pupils.

8. Young teachers are not as a rule resourceful in collecting and using illustrative material.

9. Young teachers are likely to be too arbitrary or to be too easy and indulgent with reference to discipline.

10. Young teachers find it difficult to adjust themselves, as well as their work, to local conditions.

11. Young teachers lack practical experience in home making.

12. Young teachers often plan their work as if they were thinking of the future needs of the girls rather than the present needs. That is, they do not sufficiently forecast immediate difficulties and problems.

13. Young teachers often have difficulty in operating the department within the bounds of a budget.

14. Young teachers lack the subtler elements of the technique of teaching.

15. Young teachers spend too much time on routine work.

General Point of View.—The supervisor of practice teaching should be able to give expert guidance to the young, inexperienced teachers so that they will make as few mistakes as possible and waste the least amount of time in advancing to skilled teachers. The supervisor should not attempt to check up and secure uniformity but should stimulate and promote individual growth. Best results are obtained through rational persuasion, not by force or exercise of authority. An individual reaches his possibilities in teaching just as in any other field, through interest, self-activity, and opportunity for self-expression, not by merely dutiful inspection and conscientious direction, however sound otherwise. Criticism should be constructive and never leave the sting of discouragement. Suggestions and criticisms should be given on the basis of mutually understood principles. The relation of supervisor and teacher should be the same as teacher and pupil. If she understands the weaknesses and difficulties of inexperienced teachers, the supervisor is more sympathetic and is also better able to help them over the hard places. Of course, there are differences in teachers exactly the same as there are in children. Some will need more help in one place and some in another. Since the learning processes are the same in all subjects, the problems of teaching and supervising home economics do not vary fundamentally from those in other subjects. The emphasis may vary according to the variation of equipment and subject matter.

Special Considerations.—There are, however, several characteristic difficulties which come up in connection with the supervising of practice teaching in home economics.

1. The *lack of standardization of home economics.* We have had home economics in the form of domestic science and domestic art or cooking and sewing in our schools for about thirty years. At the present time, however, we do not have either a clear idea of just *what* should be taught in the junior high school, in the senior high school, and in institutions of higher learning, or of *how* it should be taught. We have excused ourselves by saying that it is necessary for us to adjust our work to local conditions. This is very true but not an excuse for failure to grade our material. It is, for example, necessary for us to adjust our mathematics to local conditions, but certain fundamentals stand out as essentials for different grades. Not until we get some such analogous fundamental organization of subject matter in home economics can we feel sure of our procedure in supervising practice teaching. When we have our aims and minimum requirements established, we can vary the methods of presenting the subject matter to accomplish these aims just as much as we now vary the methods of presenting the material to accomplish the desired results in addition and the other fundamentals for the different grades.

The following *constructive criticisms* by Dr. H. O. Rugg in his report of the findings of a survey of the "Status of Home Economics in the Public Schools of the United States" are to the point: (1) "There is little evidence of a continuous sequentially arranged curriculum in the public schools; (2) teaching emphasis is placed on information and technique rather than on powers of thinking and judgment; (3) vague statements of aims and outcomes are prevalent which show the work to be controlled by an interest in subject matter rather than by educational and psychological motives; (4) there are few tests or scales with which to measure achievement or progress; (5) there is no definite program for curriculum making."

In this connection we may note that during the last year Miss Nina B. Crigler of Teachers College, Columbia University, did some splendid work in attempting to determine what the girl should know about food and clothing by the time she has finished the elementary, the junior, and the senior high schools. This is a much needed work, and no doubt Miss Crigler's results will receive the closest attention from home economics teachers everywhere when she has her tests completed.

2. *The position of practice teaching in the course of study in the greater number of our institutions of higher learning is not strategic.* Too often the practice teaching is "distributed" over a whole school year, and the students are carrying a full program besides. The practice

teaching is, under these conditions, only one of many interests which the students have during the period of teaching. It is, I repeat for emphasis, not unusual to find students living in the practice house, carrying full university work and practice teaching work at the same time. As long as such conditions exist, practice teaching can not receive the proper emphasis.

3. On account of the fact that a student girl teaches, as a rule, but once or twice a week in a building *it is difficult to get her to feel her responsibility to the school system.* Every circumstance operates to make her regard her work as an isolated problem.

4. *Without follow-up work and tests it is difficult for the supervisor of practice teaching to know where her work needs strengthening.*

5. When teacher-training institutions are located in small towns, as unfortunately they often are, *it is difficult to secure adequate facilities for practice teaching.*

A Sketch of Present Practice in Supervision.—The following types of schools in the United States supervise practice teaching in home economics: high schools, state colleges, private colleges, state colleges of agriculture, state normal schools, private normal schools, state universities, private universities, high school normal-training departments, and city normal-training schools.

The home economics course in these types of schools varies from 5 or 6 lessons in the normal training high schools to 4 years in the colleges and universities and from 2 to 4 years in normal schools. The amount of practice teaching required varies from zero to 48 lessons. Even the amount of practice teaching required by teacher-training institutions within a given state is not uniform. The laws of some states require 40 lessons taught under supervision before professional "life licenses" are issued. However, within these states teachers can teach home economics without having had practice teaching, provided they can pass the state examinations. Needless to say they frequently can do this. The responsibility of practice teaching varies from the formality of a student's presenting a lesson to members of her own class to vital, cumulative experience of having full charge of classes in a town or city system.

In a few places there are attempts to distribute or differentiate the practice teaching according to the grades or types of schools in which the students are preparing to teach, as junior high school, senior high school, or vocational school. More often, however, the teaching is done in any grade in any school which is having a home economics class at the time when the student-teacher chances to have "free" hours. In some schools the students teach both foods and clothing classes; in others they teach either one or the other.

The practice teaching is sometimes placed in the last term or semester of the 2-year course and in the last 2 terms or semesters of the 4-year course.

There are in use now three main ways of supervising practice teaching:

1. The student teacher is given full charge of a class during all of her teaching experience. This is usually not preceded by directed observation.

2. The student teacher is given full charge of a class in one room and observes a regular teacher in another room at a different hour. This is known as the "parallel system."

3. The student teacher has directed observation in a room with a teacher who is a specialist. Gradually she participates in the work of the room until eventually she is given full charge of the teaching of the class for a considerable period.

There are, of course, modifications of these types. For example in (1) two student teachers may have charge of the class. In this case the class is usually divided, each teacher taking charge of half of the class. One teacher usually has charge of the recitation work for the group, which is divided for laboratory work. It is sometimes thought a good plan to have both teachers prepare the recitation lesson and appoint one to teach the lesson.

Although there are many modifications of the three main plans, they all presuppose a conference on the lesson plan before it is taught, observation by the supervisor of a part or all of the lesson taught, and a conference after the lesson.

Tentative Solutions.—The following proposed plan for the gradation of practice teaching is a result of help and inspiration received from *Bulletin* number 14 of the Carnegie Foundation for the Advancement of Teaching, and a course taken with Dr. W. C. Bagley (Major Professional Course for Normal School Teachers, Supervisors, and Administrators) in the summer of 1921. A part of the plan has been tested and a part of it is theoretical. Reactions to the scheme will indeed be welcome.

The plan presupposes a 4-year teacher-training course of college or university level with the semester plan of school year division. The first 2 years are devoted to the gaining of the fundamentals of home economics, general education, and the practical experience of home making, provided the latter has not previously been gained. The following professional subjects are to be given during the last two years of the course.

Junior Year

Semester I	Semester II
Introduction to Teaching	Special Methods for Home Economics
3 hours per week	3 hours per week
Participation in Teaching	Participation in Teaching
1 class per week	1 class per week

Senior Year

Semester I	Semester II
Professionalized Subject Matter	Theory of Education
3 hours per week	History of Education
Participation in Teaching	4 hours per week
1 class per week	

The following plans for the gradation of participation for 18 weeks are intended to be used during the first semester of the junior year, one-half of the class participating in foods-teaching classes and one-half in classes of clothing-teaching. Each week adds new duties to the student teacher. She, however, not only performs these duties but all which preceded. For example, during the fifth week she would not only perform the duties there listed but also the ones listed under one, two, three, and four, except special problems for the day.

Gradation of Participation for Foods Class

1. Adjust heat, light, and ventilation. Observe the teacher's appearance, including hair, dress, "cosmetics," shoes, voice, posture, and position with reference to board and light. How did the teacher secure the names of pupils? How were pupils grouped for partners? Were they assigned by the teacher or did they choose, with the understanding that the arrangement was to last as long as the work and discipline were satisfactory? During recitation work are the pupils grouped in front of the black board or do they remain at their desks?

2. Learn the names of pupils, by chart of room, pinning name on each girl, or other device. Care for attendance record and excuse-slips. Assist with fire drill. Be present at and on occasions assist with testing the sight and hearing of a part of the class. Inspect the towels before and after they have been hung on the rack.

3. Unlock doors of the laboratory and supply closets. Test the sight and hearing of the remainder of the class. Arrange material

on bulletin board. Prepare charts, exhibits, and illustrative material. Place drawings and limited directions on the board. Check paper, towels, hand soap, chalk, erasers, individual desks for matches, soap, salt, cleanser, etc. Be responsible for pupils' rings and money while they are cooking, provided lockers are not available. Observe and report the condition of the floor around the waste basket and garbage pail. Be responsible for collecting, counting, and sending of laundry; counting and placing laundry in closet when it returns. Inspect pupils' desks at the close of the class.

4. Arrange portable material or equipment for the best results. Place towel rack so that direct rays of sun fall upon it. If children come to class from another building, supervise the cloak room, have coats and hats hung up, overshoes taken off, etc. Learn to run off mimeograph sheets for directions, recipes, etc. Observe whether partners are dividing the common work evenly; how many trips are taken to the supply table by each group; how many might have been combined. Suggest better arrangement of supplies and methods to save time and energy.

5. Check conditions and arrangement of utensils which are not often used. Be responsible for orderliness and cleanliness of cupboards and refrigerators. Distribute material to pupils. Supervise the distribution and collection of test papers.

6. Attend two or more of the pupil's academic classes in order to learn the spirit of the school, to see the reactions of the pupils with other teachers, to learn what the pupils are studying in other subjects in order to correlate the home economics work with it.

7. Assist with a demonstration and with conducting educational excursions to factories, creameries, etc.

8. Grade the pupils' recitations while the regular teacher teaches. Be prepared to care for emergencies, burnt fingers, charred utensils, etc.

9. Make out test questions. Grade the test papers and note books. Average the grades for the report cards. Copy the grades on the report cards and on the permanent records.

10. Grade the laboratory products. Make a plan or course of study for the remainder of the semester. Supervise the laboratory work of four different girls each week.

11. Teach a child who has been absent from class or one who needs special help after class hours. Make final inspection of the laboratory—sinks clean, gas and electricity turned off, windows closed, supply closets locked, room doors locked, etc.

12. List and order the kinds and quantity of needed supplies from the teacher's lesson plan. Prepare supplies before class—fresh vegetables in water, supplies on the supply table, etc. Replenish supply table during class if it needs it. If parts of supplies are exhausted, substitute—examples, condensed milk for fresh milk, rice served as a vegetable if potatoes are exhausted. Care of supplies after class, for example, left over prepared food and staple groceries.

13. Make a lesson plan. Compare it with the one prepared by the regular teacher. Attend Parent-Teachers' meeting after school.

14 and 15. Regular teacher conducts recitation. Student teacher has full charge of the laboratory. Regular teacher drops in and out during the laboratory period.

16. Regular teacher purposely called out of room to telephone, etc., the practice teacher takes charge of the recitation. The regular teacher returns for a part of the laboratory period.

17. Practice teacher takes full charge of the class with regular teacher in the room—probably engaged in reference material, etc.

18. Assists with arrangement and conducting of a school exhibit for the public.

GRADATION OF LESSONS FOR CLOTHING CLASS

1. Same as corresponding number for Foods.

2. Learn the names of pupils, by chart of room, pinning name on each girl, or other device. Care for attendance record and excuse-slips. Assist with fire drill. Be present at and on occasions assist with testing the sight and hearing of a part of the class.

3. Unlock doors of the room, supply closets, and wardrobe. Open and dust machines. Dust the tables. Test the remainder of the class. Watch the electric iron used for pressing. Arrange material on the bulletin board. Prepare charts, exhibits, illustrative material. Place limited directions and drawings on the board. Check paper towels, hand soap, chalk, and erasers. Inspect condition of the room at the end of the period—chairs under tables, scraps removed from tables and floor.

4. Learn to run off mimeograph sheets. Arrange portable equipment to the best advantage—sewing machines arranged so that light falls over the left shoulder. If the room is heated by overhead pipes, arrange the tables so that children will not sit directly under the pipes.

If the children come from another building, supervise the cloak room—coats and hats hung up, overshoes removed, etc.

5. Supervise the pressing of garments. Be responsible for orderliness and cleanliness of the supply closets. Direct the distribution and collection of test papers by pupils. Check the position of sewing boxes on shelves as they are placed by each child or by the housekeepers.

6. Same as corresponding number for foods.

7. Assist with demonstration, and conducting educational excursions to knitting mill, factory, etc.

8. Grade the pupils' recitations while the regular teacher teaches the class. Care for emergencies—burnt hands, and fingers which have been pierced with machine needles. Watch the position of children while sewing by hand and with the machine.

9. Same as corresponding number for Foods.

10. Make out a course of study for the remainder of the semester. Keep sewing machines in order. Assist pupils with the use of attachments. Keep record of bobbins for individual use. Direct arm and leg exercises during the middle of the period for children who are working at hand sewing.

11. Teach a child who has been absent or a group which is behind the class. Be responsible for condition of room—iron detached, windows closed, lights out, closet and room doors locked.

12. Attend a class play, school party, or girl scout party.

13. Make a lesson plan and compare it with the one prepared by the regular teacher. Check garment fittings.

14, 15, 16, 17 and 18. Same as corresponding numbers for Foods.

Explanatory Remarks.—If a practice teacher has completed the first semester of participation in one line in 18 weeks, she should be able to complete the other in half the time or 9 weeks. During the second half she should have full charge of both cooking and textile classes.

The preliminary practice teaching during the junior year should be done in three types of schools: the junior high school, senior high school, and the vocational school. This is a "trying out" process in order that the student may be able to select the subject in which she wishes to specialize and the type of school in which she wishes to teach.

During the first semester of the senior year the practice teacher should have full charge of a class in the type of school and in the subject which she has chosen for her speciality. This should be paralleled with a vigorous professionalized subject matter course. The 18 lessons may be given, one each week for 18 weeks, or one each day for 18 days. Or they might be given 4 each day for 4½ days. It is doubtful if the latter is advisable, however, on account of administrative conflicts, to say nothing of the necessity of omitting the paralleled subject material.

During the last half of the junior year and the first half of the senior year lesson plans are to be made and discussed with the supervisor before they are taught. The supervisor should observe a part or all of the lesson. A conference, preferably immediately after the lesson, should discuss the good and poor points of the lesson. In connection with this I have sometimes used to advantage the "Houston Texas Public School Domestic Art and Domestic Science Score Cards." The aim is not to grade the efficiency of the teacher's work as much as it is to call her attention effectively to certain desirable qualities with the hope that she will definitely set about to raise her standards. "The Qualities of Excellence in Student Teachers" by C. W. Stone could also be profitably used in this connection. I suggest also that the supervisor use Cranor's "Self Scoring Card for Supervisors."

The second semester of the senior year should offer the Theory of Education and the History of Education with special emphasis on the history of education in the specialized subject. With the use of the gradation system of practice teaching the child is protected. There is never a time when it is subjected to inferior teaching by an over-nervous teacher. The gradation from the teaching of the regular teacher to the practice teacher is so gradual that the child is scarcely conscious of the change.

With the use of this plan the practice teacher begins at once to be a part of the school and is very early made to feel her responsibility in teaching, no matter how small her first duties may be. She is gradually and without strain introduced to the three fundamental factors of the art of teaching and managing a class: method, device, and technique. The routine work becomes so habitual that when the teacher comes to class instruction, it is already relegated to its proper place in the background, and she can center her attention on the learning and teaching processes. This gives the young teacher poise and self confidence.

"However it should be constantly kept before the practice teacher that she will not be a finished product at the end of her practice teaching but that she should have a good foundation upon which to grow. Books, travel, and further study should be held as a moral duty of teachers."

THE NEW AUSTRIAN REGULATIONS FOR THE TRAINING OF TEACHERS

TRANSLATED BY EDITH A. WATERFALL

Teachers College, Columbia University

1. *Its Connection with the General Reform of Schools.*—The new form of the education of teachers is a part of the general reorganization of schools and can therefore be satisfactorily solved only in conjunction with the total structure of education.

2. *The Educational Structure.*—Having regard to the historical evolution on the one side and on the other to the spiritual development of youth and the present-day needs of the community, the school—the chief part of our educational structure—is built in 4 stories:

(*A*) *Grund schule* (primary): from 7 to 10 years of age.
(*B*) *Mittel schule* (intermediate): from 11 to 14 years of age.
(*C*) *Ober schule* (high school): from 15 to 18 years of age.
(*D*) *Hoch schule* (university): from 19 upwards.

The foundation lies in the education in the home supplemented by the kindergarten and similar institutions.

In inner union with the school—if possible built into its very structure—function the different arrangements for the care of youth. Upbringing of children and hygiene.

The education of the school is accompanied by and interwoven with that which life gives, the use and control of which is the particular task of the institutions for the education of the people and for the education of the profession.

3. *The Unified Form of the Education of All Teachers.*—The unity of the teaching profession—which is the outcome of professional content and practice—demands a similar uniformity in the preparation of all teachers both as regards its fundamental features and its spirit, irrespective of the type of school—or related activity—to which they belong: primary school, intermediate school, high school or university.

Any distinction between teachers lies solely in their classification as class teachers (for example in the primary school and perhaps in the lower two years of the intermediate school) or as specialist teachers (in the intermediate or high school), and the varying duration of their preparation as determined by this.

This is not the place to speak of the preparation for the ranks of university teachers.

4. *Preparation for the Professional Training of Teachers.*—The

high school with its general education serves best for the preliminary preparation of teachers. The most appropriate type for the preparation of the class-teacher is the "German high school."

5. *The German High School.*—The German high school is a new type of school. It places the German national life in its different aspects in the centre of its work and strives towards world culture through the study of this national material. The other high schools may be equally thorough, but the German high school makes its pupils familiar with the provinces of the German Fatherland and with the divergence in unity of the German races; it teaches the German people to know the part they play in different spheres of economic life, from the occupation of the small peasant to the gigantic management of big business; it shows the present-day forms and the historical development of custom and law, community and state; it leads its pupils into the fullness and deeps of the mother tongue, into the treasures of German literature and German art; it depicts the development of the scientific and artistic spirit in Germany, and its fundamental relationship to the spiritual life in other peoples. This rich, many-sided material must naturally be offered through the various so-called school-subjects; but even the subjects whose content is far removed from this German culture (Deutsch Kunde) take their illustrations and examples, where this can be done without artificiality, from the history and life of the German people.

Foreign languages are kept within narrow limits in the German high school (about three hours a week). In each German high school the opportunity is given of learning at least one living foreign language and Latin. Each pupil is compelled to attend instruction in one of these tongues. This compulsory instruction ought, within the narrow limits assigned to it, to serve, principally, the immediate needs of learning.

The last two years of the German high school are an introduction to philosophy. The chief principles of this form a continuous path to empirical psychology, along which at appropriate places the fundamental principles of logic are handled and the way to the problems of consciousness, aesthetics and ethics is revealed.

Into such German high schools have been changed the institutions which formerly trained teachers.

The German high school, like the other high schools, forms essentially the approach to the university.

6. *The University as the Institution for the Education of Teachers.*—

To the philosophical faculty of the university falls, besides their undisputedly high purpose of scientific research, the task, today so vital and pressing, of preparing teachers who are both widely and deeply grounded in their profession.

If this is to be possible the establishment of teachers colleges (as part of the structure of the university) is a necessity.

Such teachers colleges can at need become linked with other colleges so that in the university town other colleges can cooperate in the academic preparation of the teachers.

7. *The Professional Subjects.*—The philosophical faculty of the university in conjunction with the teachers college must care for the professional training of the teachers in educational theory.

In particular the following subjects must be taken:

(*A*) Introduction to the science of education. General and particular theories of education, general method, history of pedagogy.

These must be grounded in philosophy (psychology with child study, logic and principles of learning, aesthetics, ethics, metaphysics, history of philosophy), principles of hygiene, sociology and economics; discipline and school management.

(*B*) Introduction to the practice of teaching.

  (*a*) Discrimination among different types of methods.

  (*b*) Function of the teacher and function of education.

8. *Methods of Educating in the Professional Studies.*—For the acquisition of these subjects the following methods should be made use of:

(*a*) Lectures.

(*b*) Seminars and laboratory work.

(*c*) Research-work in methods of one particular department such as: child study, manual training, fine arts, music, hygiene, etc., and the departments of special subjects according to need and possibility. For the scientific handling of the body of education such a dismemberment is essential.

For (*a*) to (*c*) such educational facilities as are at hand in the university are to be made use of (for example: the medical faculty for hygiene; juridical faculty for the school-law, sociology, and economics); for the rest other educational facilities must be arranged.

(*d*) School-practice: Observation of instruction, demonstration lessons, courses of lessons, educational hand work, external and self-criticism, conferences, and whatever else can serve to give living experience in the aim and methods of the school.

NOTE to (*d*).—The practice (and observation) school must be an integral part of the Teachers College and the different school-types and kindred activities retained. This also applies to neighborhood schools which are drawn upon for this purpose.

9. *Specialist Studies.*—On the philosophical faculty of the university will devolve as heretofore the particular preparation of the future *specialist* teacher. By this means the aims of the school are fully cared for.

At the same time the future *class teachers* will make use of the means of education provided by the colleges for the fullest possible study of the field chosen by each.

Within the group of professional subjects the following are to be distinguished:

10. *Divisions of the Professional Subjects.* (*A*) *Introduction to Pedagogy.*—This is to be taken in the first year of study and is so enjoined in the rules of every official catalogue. It includes a general introduction to educational theory (general principles of education and instruction together with the fundamental auxiliary sciences) and also educational practice (observation and practice-teaching in the training school, conferences with the instructors) and ought to help determine whether the student possesses capacity and inclination for the teaching profession in general and if so for which type of school he is most fitted. By means of an oral examination (a colloquy) involving criticism of the activities in the training school as well as a written essay the student is helped to make an estimate of his suitability for the teaching profession.

(*B*) *Class-teacher Subjects.*—This is enjoined for the second year of university-study and brings the educational course of the class teacher to an end. Consequently it gives preference to the professional training for the work of the primary school (and possibly of the lower two years of the intermediate school) and the subjects of child study, the particular principles of education and instruction for these stages of school life, and the activities of the corresponding sections in the training school. By such means more fundamental inquiry into the scientific problem of pedagogy (for example in the history of pedagogy the development of educational problems) and appreciation of the living unity of the various branches of education, ought to be fostered.

(*C*) *Special Subjects.*—This comprises the second to the fifth years at the University and is based upon the needs of teachers in the Intermediate and High Schools. Here takes place the scientific handling of important questions, indispensable to modern pedagogy and here also insight into the unity of educational processes at whatever stage is encouraged. In consequence of this extended course the pedagogical preparation of the teacher can, without detracting from its importance, be somewhat curtailed during the last four years in order that the thoroughgoing preparation in subject-matter may not suffer.

Transference is possible from class-teacher subjects to specialist subjects and vice versa.

11. *Examination of Teachers.*—The capacity of the teacher is decided by examination. One of the conditions of admission to the examination is proof of attendance at classes at the teachers college. Class teachers have besides to submit proof of capacity (perhaps from an instructor who witnessed their oral examination) in their chosen field (9 section 2).

(*A*) The examination of the class teacher is in educational theory and practice. It consists of

- (*a*) The practical examination when possible in the form of connected teaching;
- (*b*) Two papers written under supervision of which one deals with the general principles of education and the other with the special field of the class teacher;
- (*c*) An oral examination whose starting point is determined by the two previous examinations (*a* and *b*), and its form and aim by the profession of the class teacher. The practical examination takes place at the earliest during the second half of the second year, that of the written and oral at the end of this half-year at the earliest.

(*B*) The examination of the specialist teachers is divided into 2 parts:

- (*a*) The academic examination which corresponds to the old form of examination for the teaching profession. It comes at the earliest in the ninth half-year of the course.
- (*b*) The pedagogical examination in the theory and practice of teaching. It comprises
  1. The practical examination where possible in the form of connected teaching;
  2. Two papers written under supervision of which one deals with the general principles of education and the other with the field of work of the specialist teacher;
  3. An oral examination whose starting point is determined

by the two previous examinations (*a* and *b*) and its aim and form by the profession of the specialist teacher.

The practical examination finds place after the completion of the academic examination and comes at the earliest during the tenth half-year, while the written and oral examinations are held at the earliest at the end of this half-year.

12. *The Preparation of Teachers of Defective Children.*—The preparation on a scientific and educational basis of the special teachers (teachers for the backward, blind, deaf and dumb, those suffering from speech defects) is provided for at one or another of the teachers colleges through lectures and exercises but the practical preparation is transferred to the specific institution, which for this purpose must form an integral part of the teachers college.

13. *The Teachers College as the Place for the Preparation of Teachers.* The teachers college is the professional institution for the preparation of teachers. It should be the centre for all educational special courses and particularly further the efficiency of the teachers in the schools of the town in which the university is placed. For such purposes the following methods are especially serviceable. Serial courses given in the different departments of the college, publications ("The Educational Weekly"), organized expeditions, etc.

For the further education of the teaching body in academic subjects similar arrangements should be made with the other colleges.

For participation in these arrangements State grants can be obtained.

14. *The Staff of the Teachers College.*—At the teachers college there are:

(*A*) The regular professors of the educational sciences.

(*B*) Professors and instructors for educational departments, auxilliary sciences, and specialist instructors in types of schools and subject-matter.

Besides these there are distinguished teachers for all the activities analogous to those of the school.

(*C*) Teachers and demonstrators of the different departments of the practice school.

(*D*) Assistants. In addition there are the administration officials and servants.

One of the regular professors, aided as occasion demands by colleagues, will take charge of the teachers college.

15. *The Locality of the Teachers College.*—Teachers colleges are

established at the Universities of Vienna (through arrangement with the Teachers' Academy), Graz and Innsbruck.

16. *Preparation of Teachers for Science Schools and Continuation Schools.*—For the preparation of teachers for domestic, manual and agricultural institutions there are to be created corresponding educational facilities in the technical colleges, commercial colleges and agricultural colleges whereby the university institutions may be drawn upon as far as possible to promote this aim.

Teachers for the compulsory continuation schools will be prepared in special courses which will meet their needs.

THE USE OF A "SLIDING PROGRAM" IN TRAINING SCHOOLS[1]

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It is an established principle of vocational education that the best method of imparting the skill and technical knowledge needed in any vocation is through actual participation in the activity being learned. This principle is undoubtedly applicable to the professional preparation of teachers for the public schools. That its validity has been accepted in practice is shown by the fact that a training school is maintained by practically all normal schools and teachers colleges. However, there is no uniformity in the nature and amount of student's contact with the training departments in the various teacher training institutions. Saunders[2] found a variation in the amount of student teaching required from thirty to four hundred teaching hours. Judd and Parker[3] report a variation among thirteen schools studied, of from 4 per cent to 27 per cent of the total curriculum requirements.

Too little attention has been given to devising sorts of participation which will provide more active contact with the training school. In too many schools student teaching still ends with the teaching of the single subject to a small group of pupils for a single period. The important problem is to increase opportunity for more, and more varied, responsible teaching. It is clearly desirable for prospective teachers to be actually initiated into as many of their characteristic responsibilities as possible; to observe expert teaching in as many of their future subjects as possible; to come into direct and practical contact with such important phases of the teaching process such as supervised study, opening exercises, the correlation of various subjects, and so on.

There are certain obvious difficulties in the way of providing both more frequent and more vital contact with the training school on the part of students. One such difficulty is the overcrowded curriculum. There is not time for the student to do all that he should do in the time in which he tries to get his professional preparation. Another difficulty is the overloaded program of training school teachers. There are few departments in a teacher training institution which place as heavy a load upon its members as the department of the training school.

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[1] The writer is indebted to Miss Hulda Dilling, third grade training teacher, Colorado State Teachers College, for her valuable suggestions, and the successful methods she has used in carrying out this sliding program.

[2] Saunders, W. H.: *Ped. Sem.*, March, 1918, p. 55.

[3] Bureau of Education *Bulletin* No. 2, 1916, p. 85.

The "sliding program," which is the topic of this paper, is an attempt to make more direct, active, and varied the students' contact with the training school without at the same time increasing the overloaded programs of training teachers and without increasing the total number of hours of student teaching where the requirement is already as great as the curriculum will allow. The central purpose of the sliding program is to afford an opportunity for student teachers to have practice and training in teaching more than one subject a quarter, and also to give them (and the observation classes) an opportunity to observe the training teacher teach more than one subject.

Leaving the matter of objections for consideration at the close of the exposition, we may for the present dogmatically assert that "the sliding program" in no way whatsoever affects the subjects taught; it simply changes the period of certain studies in the room or grade program. (See Table I.) Whatever may be thought in advance, there is absolutely no waste of time caused by readjustment of the program provided the teacher has given due time and intelligence to working out her program.

After several years of critical trial of this kind of program and of experimentation with the effectiveness of periods of varying length, ranging from a change every week, a change every 2 weeks, every 3 weeks, once in 4 weeks, once in 6 weeks, once in 12 weeks, and, on occasions, no change throughout the year, it has come to seem that probably the needs of student teachers are most effectively met by three changes of subject a quarter.

The following tables give a concrete illustration of the sliding program as carried out during the spring quarter, 1920–1921, showing the changes during each period of time for the entire quarter.

From Table I it will be seen that the only subjects which do not change in time are such special subjects as opening exercises, playground, music, penmanship, art and construction work. It will be clear that the sliding program has either enabled each student teacher to observe her training teacher teach, or she herself has taught, from five to seven different subjects during the quarter.

Let us take for example one student teacher's work for the whole quarter to see how the sliding program affects her teaching. (See

TABLE I.—"SLIDING PROGRAM" OF SUBJECTS
Spring Quarter, 12 Weeks
1920–21

Time	First 4 weeks (1, 2, 3, 4 weeks)	Second 4 weeks (5, 6, 7, 8 weeks)	Third 4 weeks (9, 10, 11, 12 weeks)
9:0–10:00	Opening exercises History and story telling A and B Arithmetic A and B	Opening exercises Remedial reading Reading A and B	Opening exercises Spelling A and B English A and B
10:00–11:00	Playground Music English A and B Spelling A and B	Playground Music Geography and nature study	Playground Music Reading A and B Reading (remedial)
11:00–12:00	Recreation Reading A and B Penmanship	Recreation Arithmetic A and B Penmanship	Recreation Nature study and Geography A and B Penmanship
12:00–1:30	NOON		
1:30–2:30	Recreation Reading A and B	Recreation Garden work Reading (A and B classes alternating)	Garden work Reading
2:30–3:20–	Geography and nature study A and B Dismissal	English Spelling A and B Dismissal	Arithmetic A and B Dismissal

Table II.) Taking for example Miss A, who teaches during the nine o'clock period.

It will be clear that during the entire first week Miss A observed her training teacher. The training teachers, we may note, generally teach the entire week for all the new student teachers. Beginning with the second week and continuing through the fourth week, which makes up the first shift of the sliding program, from 9:00 to 9:10 Miss A observes morning exercises, with the assurance that she will within a short time have responsibility for conducting such an exercise.

TABLE II.—TRAINING TEACHER'S AND STUDENT TEACHERS' PROGRAM
Spring Quarter 1920–21, 1st, 2d, 3d, 4th Weeks
Student Teachers' Schedule

Student teacher	Teaching	Observing	Supervising
A	Arithmetic A, 9:25–9:40	History, 9:10–9:25	Arithmetic A, study period, 9:40–10:00
B	Arithmetic B, 9:40–10:00	History, 9:10–9:25	Arithmetic B, 9:25–9:40
C	English A, 10:40–10:55	Music, 10:25–10:40 Spelling A and B, 11:10–11:25	English A, study period, 10:40–10:55
D	English B, 10:55–11:10	Spelling A and B, 11:10–11:25	English B, study period, 10:40–10:55
E	Reading A, 11:30–11:55	Penmanship, 11:55–12:10	Lunch room, 11:55–12:20
F	Reading B, 11:30–11:55	Penmanship, 12:00–12:10	Lunch room, 11:55–12:20
G	Geography and nature study, 2:45–3:00	Reading A and B, 2:25–2:45	Geography and nature study A, 3:00–3:20
H	Geography and nature study, 3:00–3:20	Reading A and B, 2:25–2:45	Geography and nature study B, 2:45–3:20

Training Teacher's Schedule

Time	Teaching	Supervising
9:00– 9:10	Opening exercises	
9:10– 9:25	History A and B	
9:25–10:00		Arithmetic A and B
10:40–11:10		English A and B
11:10–11:25	Spelling A and B	
11:25–11:30		Recreation
11:30–11:55		Reading A and B
11:55–12:10	Penmanship A and B	
2:20– 2:25		Recreation
2:25– 2:45	Reading A and B	
2:45– 3:20		Geography and nature study A and B

Then from 9:10 to 9:25 she observes the training teacher teach history. From 9:25 to 9:40 Miss A teaches her regular class in Arithmetic A, while the training teacher supervises; from 9:40 to 10:00 Miss A, during their study period in arithmetic, supervises the written work of the arithmetic A class which she has just had in recitation. Then beginning with the second shift, the fifth, sixth, seventh, and eighth weeks (Table III), Miss A observes the training teacher conduct opening exercises and occasionally conducts them herself; from 9:10 to 9:30 she observes the training teacher teach a class in "remedial"

TABLE III.—TRAINING TEACHER'S AND STUDENT TEACHERS' PROGRAM
Spring Quarter 1920–21, 5th, 6th, 7th, 8th Weeks
Student Teachers' Schedule

Student teacher	Teaching	Observing	Supervising
		Opening exercises 9:00–9:10	
B	Reading B, 9:30–9:55	Reading (specials) 9:10 (alternate days)	Reading, 9:10–9:30
A	Reading A, 9:30–9:55	Reading (specials) 9:10 (alternate days)	Reading, 9:10–9:30
C	Geography and nature study A, 10:40–11:00	Music	Geography and nature study, 11:20
D	Geography and nature study B, 11:00–11:20	Music	Geography and nature study, 10:40–11:00
E	Arithmetic A, 11:23–11:30	Thursday (any period)	Lunch room, 11:55–12:20
E	Arithmetic B, 11:30–11:53	Thursday (any period)	Lunch room, 11:55–12:20
G	English A, 2:45–3:00	Reading A and B, 2:20–2:45	Spelling A, 3:00–3:20
H	English B, 3:00–3:20	Reading A and B, 2:20–2:45	Spelling B, 2:45–3:00

Training Teacher's Schedule

Time	Teach	Supervise
9:00–9:10	Opening exercises	Penmanship
9:10–9:30	Remedial reading (specials)	
9:30–9:55		Reading A and B
10:40–11:20		Geography and nature study A and B
11:20–11:25	Rest period	
11:23–11:53		Arithmetic A and B
2:15–2:20	Recreation	English A and B
2:20–2:45	Reading A and B	
2:45–3:20	Garden work (depends on weather)	Spelling A and B

reading. It will be noted that Miss A's observation work alternated with study-period work in reading so that her companion student, Miss B, might have an opportunity in the same period. Then from 9:30 to 9:55 Miss A taught her regular class in reading, during which time she was supervised by her training teacher.

Table IV shows the third or last shift of the program for the quarter beginning with the ninth week and continuing through the twelfth.

TABLE IV.—TRAINING TEACHER'S AND STUDENT TEACHERS' PROGRAM
Spring Quarter 1920–21, 9th, 10th, 11th, 12th Weeks
Student Teachers' Schedule

Student teacher	Teaching	Observing	Supervising
B	English B, 9:40–10:00	Spelling, 9:10–9:25 Opening exercises, 9:00–9:10	
A	English A, 9:20–9:40	Spelling, 9:10–9:25 Opening exercises, 9:00–9:10	
C	Reading A, 10:40–11:05	Thursday observation reading, 11:05–11:25	Alternating study period, 11:05–11:25
D	Reading B, 10:40–11:05	Thursday observation reading, 11:05–11:25	Alternating study period, 11:05–11:25
E	Nature study and geography, 11:30–11:50	Thursday, any period	Lunch room work
F	Nature study and geography B, 11:30–11:50	Thursday, any period	Lunch room work
G	Arithmetic A, 2:45–3:05	Gardening or reading A, 2:25–2:45	Arithmetic A, 3:05–3:20
H	Arithmetic B, 3:05–3:20	Reading B, 2:25–2:45	Arithmetic B, 2:45–3:05

Training Teacher's Schedule

Time	Teach	Supervising
9:00– 9:10	Opening exercises	
9:10– 9:25	Spelling A and B	
9:25–10:00		English A and B classes
10:40–11:05		Reading A and B classes
11:05–11:25–11:30	Remedial reading	Recreation
11:30–11:40	Gardening	
2:20– 2:45	Reading A and B classes	
2:45– 3:20		Arithmetic A and B classes

During this shift, it will be seen, Miss A observed the training teacher conduct opening exercises from 9:00 to 9:10. From 9:10 to 9:30 she observed the training teacher teach spelling and word drill to both classes; from 9:30 to 9:45 she taught her own regular class in English A under the supervision of the training teacher. Then from 9:45 to 10:00 Miss A took, for their study period work in English, the class she had just had in English A recitation work.

In connection with the foregoing it should be noted that every Thursday the training teacher teaches all the classes in all the regular subjects all day, giving the student teachers and other observers an opportunity to study a demonstration class. In addition to this the training teacher, as the directly responsible supervisor, takes the student teacher's classes at times when she sees it is clearly in the interest of the children or the student teacher to do so.

Thus, Miss A has taught during the quarter the following subjects: arithmetic, reading, and English; occasionally she has conducted the opening exercises which she has often observed; she has observed the training teacher teach regularly a number of subjects, history and story-telling, remedial reading and spelling, and all the subjects taught at a given period in a shifting program on Thursday; she has observed the range of opening exercises, and had some experience in planning and conducting them herself. Miss A has also supervised the study period of her own class in arithmetic, reading, and English.

In like manner, going through the entire program of three shifts, it will be seen that the student teachers teach at least three subjects, observe their training teacher teach three subjects, supervise a study period each day, and one day a week have the opportunity to see as many classes taught by the training teacher as they have time to observe. This gives the student teacher a considerable range of contacts which should result in a better understanding of the problems of teaching; she has besides, more experience as an observer of expert teaching and in more subjects than is usual, and during one quarter she gets a short period of concentrated practice in teaching in several different subjects in the grade, under close supervision.

So much for the general operation of the plan. Its advantages have so far been in the foreground. It will be well now to consider the limitations of the plan. First, the sliding program does not adapt itself well to the special subjects nor to the subjects in the upper grades where the work is largely departmental and subject matter is less tractable than in the lower grades. The student teachers in the special subjects and those teaching in grades seven, eight, and nine, are preparing themselves to be special subject and junior high school teachers. When they graduate and go out to teach they will teach generally not more than two or three subjects. Such student teachers are expected to teach two quarters in their major subject and one quarter in their minor. If upper grade and junior high school teachers were expected to teach as many different subjects as the elementary school teachers then the sliding program which has been described would be just as valuable for junior high school teachers as elementary teachers.

There are other limitations, no doubt, and some of these may be valid objections. But the usual objections raised to the sliding program are, on the whole, more apparent than real. It is agreed by all that the unity of any subject must be preserved. Some have thought that the change in subject brought about by the sliding program violates this principle and that children are always being taught by student teachers who are approaching the subject for the first time. Just about the time the student teacher is becoming efficient in teaching a subject (so the criticism runs) she is changed and starts out anew on a different subject. This points out clearly a very real danger. In answer to this objection it might be said that the degree of efficiency desired could hardly be reached in the whole of a 2-year course. No one knows in advance how long a given student must teach a given subject in order to become masterly as a teacher of it. Our experience in using the sliding program has suggested to us, however, that continuity of development in both pupils and student teachers is not seriously endangered if supervision is reasonably efficient. It is a question of relative values. The student teacher who is on graduation to teach a number of subjects needs practice in teaching a number of different subjects before graduation. The scheme set forth is one way of meeting this need.

Another objection to the sliding program is that it does not consider the question of fatigue as related to school subjects. Are we justified in giving a subject at just any time on the program? Should arithmetic always come at 9:00 o'clock and some mechanical subject at 3:30? At the present time it seems probable that we are not entitled to say that there is any one hour during the day when any given subject should be taught rather than another. Arithmetic taught in the afternoon may give as good results as arithmetic taught in the morning. The time of day at which a subject comes is not nearly so important as the quality of teaching done and the feeling of need which pupils are led to have for the subject.

The sliding program, in short, is an attempt to mitigate two evils in the usual organization of practice for student teachers. A longer period of time each day would no doubt result in more efficient work on the part of both student teachers and the children taught. In too many teachers colleges with too small training schools, student-teaching ends with a too short an experience in the teaching a single subject to a diminutive group of pupils for a single period. It is desirable that practice be extended to include teaching with more complete responsibility for a longer period with more different subjects and more different activities involved in teaching each subject. Student-teachers who are preparing for teaching in the elementary schools should, during their pre-service education, teach more than a single subject—preferably three or four subjects; the number of subjects should whenever feasible be enlarged to cover the entire curriculum.

BOOKREVIEWS

STONE, CLIFF W. *Standardized Reasoning Tests and How to Use Them.* New York: Teachers College, Columbia University, 1921, pp. VI, 33.

The widespread use of standard tests and scales for survey purposes has been rapidly followed by the use of these means of measurement of school achievement for purposes of supervision and of improvement of teaching by means of diagnosis and by better motivation. Those directing surveys have had little difficulty in planning means for the summary and representation of results from test giving. The classroom teacher, the supervisor, the principal and the superintendent have not always been so fortunate. To assist these people in realizing the full possibilities of measurement has been a task challenging much time and effort.

Dr. Stone, using the Standardized Reasoning Tests in Arithmetic as an example, has made available through a recent publication of Teachers College, Columbia University, many excellent schemes and suggestions on how to summarize and represent scores. Another needed and well-handled feature of the publication is the suggestive section on "Utilizing Results," in which are outlined the possibilities of utilizing the tests under discussion with concrete devices for moving toward these possibilities.

Sections I and II describe the tests and give directions and suggestions for giving them. The tests which are calculated to test reasoning in arithmetic consist of twelve problems of type commonly called "clothed" or "story" problems. Each of those, while involving certain fundamental arithmetical operations, also involve several steps in reasoning, *e. g.*, whether to divide, subtract, or add. Reasoning Test I is familiar to many interested in arithmetic and in educational measurements.

The test in fundamentals is also reproduced in this section. This test, however, has been "so modified and improved by Courtis that it has been replaced by his series B."

The offering of Test II, an alternative test, adds considerable to the utility of the tests which, though among the first educational measurements devised, have continued to enjoy almost exclusively the field in reasoning in arithmetic.

In Section III, the directions for scoring the tests are somewhat different from the ordinary procedure. Four separate plans are described for survey purposes:

1. Crediting only correct answers.
2. Scoring only the reasoning steps counting partial solutions, to be used for supervision and diagnosis where the individual pupil is under examination or where the class is small.
3. Scoring reasoning steps but not counting partial solutions for diagnosis and supervision of larger classes.
4. Scoring for accuracy in which the per cent of problems attempted which are reasoned accurately is computed.

These suggestive scoring methods serve to correlate rational procedure of methods with the aim of the testing. In all but the last method the scores are determined by the adding the determined problem weights.

Section IV sets forth the standard scores for the different scoring methods. The number of students upon whose papers these standards or norms are based is sufficiently large for very valuable comparison, with the exception of the case of the fourth scoring method where the author offers frankly provisional norms.

The monograph throughout is commendable for its clearness and for the appropriateness and number of illustrations and illustrative examples. Certain minor criticisms might be made. In one place the author suggests that the norms for reasoning determined by counting partial solutions have been scored. This is left to be taken on faith. Again, the use of weights very likely adds nothing to the reliability of scores. On the other hand, in the case of these tests, they add little to the complexity of scoring.

Those responsible for tests and scales in various fields of knowledge and skill would rapidly further the use of tests and scales by giving to the class room teacher and the administrator a clear-cut program for complete administration of their particular products. Superintendents, principals, and teachers who have experienced difficulty in representing and utilizing results from standard tests of all sorts may in the meantime receive considerable and practical help in the pages of this recent publication.

HARL R. DOUGLASS.
University of Oregon.

BOOK NOTES

HISTORY

1. *The Outline of History.* H. G. Wells. Vol. I, 648 pages; Vol. II, 676 pages. New York: The Macmillan Company.

2. *American History and Government.* Matthew Page Andrews. 528 pages. Philadelphia: J. B. Lippincott Co.

3. *American Citizens and Their Government.* Kenneth Colegrove. 333 pages. New York: The Abingdon Press.

4. *Historical Source Book.* Hutton Webster. 215 pages. New York: D. C. Heath & Co.

5. *First Book in United States History.* Waddy Thompson. 412 pages. New York: D. C. Heath & Co.

6. *Heroes of Progress.* Eva March Tappan. 263 pages. New York: Houghton Mifflin Company.

Novel-readers doubtless look upon Mr. Wells as a natural born historian, and history-readers as naturally regard him as a born story-teller. Mr. Wells made his initial reputation by his work in fiction. In later years he has become ambitious to rank as a historian and a publicist. His imagination—and he was always an exceedingly imaginative fictionist—insists on asserting itself even when he writes on history or politics. (1) *The Outline of History* is a product that can easily be over praised, and it can as easily be unfairly condemned. No truthful critic can deny that it is a monumental work. That such a gigantic undertaking should have its flaws, is to be expected. The very voluminousness of the product seems responsible for a marked unevenness in the style. Portions of the book show Mr. Wells at his best as a writer, and others show him at his worse. In their entirety, however, the volumes are entertaining and instructive. Within a thousand pages, the author attempts to give a bird's-eye view of history from, say 50,000 years before the Christian era, to date. In undertaking the job, the writer was naturally biased, and his bias asserts itself in the extended space he gives to the earliest times, about which we know little definitely, and to the very latest times, about which we are not in a position to express seasoned conclusions. On the whole the first portion of the book is unquestionably the more carefully thought out and the more cleverly written. Even though the reader may not agree with all the author's speculations, it is doubtful if many will complete the first book without having gained something in the way of larger appreciation for the earliest periods of history in their bearing upon subsequent events. The section of the book that is devoted to modern times will also afford the reader a concrete picture of the trend of progress in all countries, without necessitating that he piece together data gathered from miscellaneous sources. That part of the Well's text shows is bias is perhaps a small demerit as compared with his performance in producing a remarkable panorama of the world's story.

Mr. Andrews, who has to his credit several works on American history, in his latest offering presents what he doubtless regards as a compromise between the position of the old-time historian who gave thought primary to battles and explorations and the more modern historian who stresses the industrial and social development of the country as of equal, if not major, importance to the military. (2) *American History and Government* is a well-made book. The text is attractively displayed, and on the whole the selection of illustrations shows judgment in their choice and high printing art in reproduction. The text, however, offers no particular distinction. While the Andrews' book, from its title, might be supposed to cover both history and civics, it gives little attention to the later subject; on the other hand, Prof. Colegrove's (3) *American Citizens and Their Government*, although professedly a work on civics, presents an unusually rich historical background. At a time when the activities of government, both national and state, are being diverted into new fields, it is desirable to give the student a course in civics that will not only cover governmental practices of the present, but will look into their origin and their initial purpose. Dr. Colegrove does this most interestingly. Perhaps the largest value to Webster's (4) *Historical Source Book* comes from the fact that it is brought to date, covering the work of the Hague Peace Conferences and also the move to establish a League of Nations. The earlier material, although well presented, is about the same matter that has been used in the older sources books. (5) *First Book in United States History* and (6) *Heroes of Progress* are elementary texts containing much biographical material of the kind most readily absorbed by beginners in history.

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EDUCATIONAL DETERMINISM; OR, DEMOCRACY AND THE IQ[1]

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As used in this discussion, educational determinism means the attitude of mind consequent upon the conviction or the assumption that the influence of education is very narrowly circumscribed by traits or capacities which, for each individual, are both innate and in themselves practically unmodified by experience or training. This attitude is no new thing; within the past ten years, however, it has been given an emphatic sanction and a very widely extended currency by the development of mental measurements, and particularly by the hypothesis of "general intelligence" which has been brought into high relief by the measurement investigations. It is the purpose of the present paper to show that the sanction which mental measurements apparently give to educational determinism is based, not upon the facts that measurements reveal, but upon the hypotheses and assumptions that the development of the measures has involved; that these hypothesis and assumptions while doubtless justified for certain purposes are at basis questionable in the last degree; and that the present tendency to extend them *ad libitum* beyond a very restricted field is fraught with educational and social dangers of so serious and far-reaching a character as to cause the gravest concern. I shall also attempt to show that, even if the assumptions are granted, many of the fatalistic inferences drawn from the data in hand are not justified.

I wish to say at the outset that I have no personal animus in this discussion. For the notable achievements of the men working in the field of mental measurements I have the highest respect and the warmest admiration. Many of these men have been extremely cautious regarding the inferences that they have drawn whether from their assumptions or from their facts. Many of them, indeed, are not "determinists" at all, and would in no case be subject to the criticisms that I shall apply to the deterministic theories. Even those who are radical determinists are sincere in their beliefs; and among them are men so keen and so competent that it is with the greatest temerity that I venture to challenge the validity of some of their conclusions. Were it not for my conviction that there is at stake a great ideal—an ideal that has already cost more in terms of human striving and suffering and sacrifice than anything else in this world of ours—were it not for this, I would not for a moment presume to pit my judgment against the judgment of men for whom I have a respect that amounts in many cases to a veneration.

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[1] Paper read before the Society of College Teachers of Education, Chicago, Feb. 27, 1922.

It is sincerely with this attitude that I proceed to the tendencies of present-day educational determinism which the assumption or hypothesis of native "general intelligence" is encouraging.

In the first place, in order to prove that I am not attacking a man of straw, I shall present documentary evidence showing the extent to which some of the alleged facts and interpretations in the field of intelligence testing have been generalized in fatalistic conclusions. I may take as an example the apparent support that these alleged facts, and interpretations give to those who oppose the expenditure of public funds necessary to provide on a universal scale education of the type that will be needed if the ideals of democracy are to be realized. I quote from an editorial in the January issue of an English educational journal:

"Last month we drew attention to the significance of Lord Inchcape's observation that there are 'limitations of the economic usefulness of education.' The *Pall Mall Gazette* has now gone one better. It has made the discovery (on the authority of Dr. R. R. Rusk, Lecturer on Education to St. Andrew's University), that 70 per cent of the children of this country will never develop any more intelligence than that which should be possessed at the age of fourteen, and, consequently, further education is wasted on them? Of the remaining 30 'only four will be found fit to take an Honours degree at the University.'

"This 'discovery,' the result, we are told, of psychological tests made on children in America, Germany and Scotland (but not apparently in England) has suggested to the *Pall Mall's* correspondent a method whereby 'education will be improved and, at the same time, expenditure decreased.' In future a series of tests applied to each child between the ages of three and twelve will enable the authorities to know exactly which of them is fit for further continued education; so that 'a great economy would be effected through the removal from school of a large number of dull and useless children,' and 'better provision would be made to develop the brain of the super-normal child.'"

I may also refer to the able and well-written article by Mrs. Cornelia James Cannon in the current *Atlantic Monthly* as indicating clearly the inferences that an intelligent lay mind can hardly fail to draw from the published reports of the results of the psychological tests as given in the Army. Mrs. Cannon after a careful study of this and other measurement literature reaches unquestionably fatalistic conclusions regarding the possibilities of education. She even states that the evidence apparently justifies the inference that practically one half of the adult population of our country are to be classed as morons.

It may be objected that both of these cases represent the interpretations of amateurs in this field. In answer I quote the following from an editorial in one of the two leading technical journals that represent the measurement movement in this country:

"Those who evince a given degree of mentality have it as a possession as inherently as they have blue eyes or Roman noses. Unconsciously the school, year after year, sifts through meshes of larger and larger size those who are relatively less capable, and retains those whose endowments mark them for intellectual success.

"As an institution devoted to preparing the young for more complete living, the school has always been so much an agency of selection that it is a question whether those who receive its benefits are as much *developed* as they are *certified* for the affairs of life."[1]

This is a sample of the conclusions that are being drawn by some of the professional students of mental measurements, not from the facts that they have discovered, but from the assumptions that they have made. May I follow it a little further? What is this thing called mentality which is here stated to be just as definitely given or withheld by heredity as are blue eyes and Roman noses? Eyes and noses are anatomical structures the determinants of which are fairly well understood. Mentality, whatever it may be, is clearly not an anatomical structure, but a function. Even as a function, there are the widest divergences of opinion among the determinists themselves as to just what it does, let alone what it is. That it is closely bound up with the anatomical structure that we call the nervous system we all agree; but the essential elements of the nervous system are emphatically *not* the stable and unchangeable kinds of structure that iris-pigment and the bones of the nose just as emphatically are. When I began the study of psychology a quarter of a century ago, I was taught that the degree of mentality depended upon the number of nerve cells in the cerebral cortex. Fifteen years later, we had come to the conclusion that differences in the readiness of synaptic connections were the physiological basis of differences in mentality. In other words we had shifted the basis from an anatomical structure to a physiological function. Today there seems to be a possibility that the development of the nervous substance and the readiness of synaptic connections depend upon the stimulating effect of hormones which have their origin, not in the nervous system at all, but in certain glands, notably the pituitary, the thyroid, and the adrenals. Thus mentality, which the writer just cited so nonchalantly and yet so authoritatively identifies with a pair of simple anatomical structures, is clearly not a structure but a function; and to the best of our knowledge it is not even the immediate function of any structure or set of structures, but rather the end function of intermediate functions of other functions, which ultimately, we believe, work back to interlocking groups of structures through a maze the complexities of which have so far baffled every effort at analysis.

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[1] *Journal of Educational Research*, February, 1921.

Please do not misunderstand me. I am not an obscurantist. Some day the puzzle will be solved. But what we know already is more than sufficient to discredit any such artificial simplification as is represented by this crude and deceptive analogy between degree of mentality and blue eyes.

I hesitate to say that this is a fair sample of determinist's reasoning. I am convinced, however, that many if not most of the fatalistic inferences that he draws from his postulates are equally questionable. If he answers that in this particular case he was talking in words of one syllable for simple folk, let me follow him into some of his more fundamental assumptions.

These may be illustrated by the emphasis that he continually places upon innate traits as contrasted with educative influences in determining human character and human achievement. A good example is the implication that the school has always been much more a certifying agency than an educating agency. We know, of course, that large numbers of children leave school, betimes and that some of these leave because they can not do the work that the school demands, but this is very far from saying that the mentality of those who remain is more important than the teaching to which they are subjected in determining their character and achievements. Mr. Colvin, in his very sensible discussion of intelligence tests in the current *Yearbook* of the National Society for the Study of Education, makes this statement: "The brightest European child reared from birth by a group of African pigmies would appear as a moron or worse if later transported to a highly civilized and cultured environment." According to the determinist, however, the teacher who works some of the most important of these miracles of transformation is only a sort of rubber stamp to certify that his pupils have a certain amount of native intelligence. Again I submit that the determinist has come to some of the most sweeping of his conclusions not from a contemplation of his facts but through an *a priori* process of reasoning from his assumptions.

Let me now, with due humility, examine the basic assumption that underlies the whole theory of mental measurements. Native mentality or native intelligence, the determinist himself will admit, is not directly measured by the tests. What is measured? Let me again quote Mr. Colvin:

"*We never measure inborn intelligence; we always measure acquired intelligence, but we infer from differences in acquired intelligence, differences in native endowment when we compare individuals in a group who have had common experiences and note the differences in the attainment of these individuals.*" (*Yearbook*, p. 19; italics in original.)

This, then, is the assumption back of the IQ which is playing so important a part now in our educational programs and which threatens to overturn the entire theory and practice of democratic education. The validity of mental measurements and of every inference that is drawn from the alleged facts that the measurements have disclosed is based upon the assumption that *with respect to the materials of the tests* the environment, the experience, the education, the stimulation, and the inspiration of those compared have been identical. We have had assumptions in science before this; in fact, the history of science is largely the history of assumptions and hypotheses. They have their place. *This particular assumption has its place*, and restricted to this place I grant its pragmatic justification. Generally speaking, its justification is clearest in the simplest tests which detect differences between some mentality and no mentality at all. As we pass from the lowest to the higher "mental ages," the validity of the assumption is rapidly weakened. The tests even then measure a certain ability or group of abilities, but the contributions of experience become so numerous and influential and these vary so widely even among individuals of fairly homogeneous groups that it is the height of absurdity to contend that it is a native and unmodified factor that is being measured. Yet this contention is made the basis of sweeping conclusions regarding what education can or cannot do. If the determinist claims scientific validity for these extensions of his theory I say without fear of contradiction that no theory in the whole history of science has been based on a group of assumptions so questionable.

Let us see how the determinist abuses his assumptions. On the basis of tests which admittedly measure the influence of experience he argues back to a hypothetical factor which, far from having isolated, he has never clearly defined. The closest that he has come to a satisfactory definition is to call this factor "ability to learn." He then by an act of pure imagination reads out of the product everything that experience, education, and training have contributed. He has had no notion how much they have contributed or where their contribution stops. Within a month he has been confronted with the conclusion, based upon the very statistical methods upon which he himself has relied that no less than fifty-four per cent of whatever it is that is measured as native intelligence turns out to be the result of experience and training. And yet his confidence in his earlier inferences seems to be unshaken. He makes some confident statements about the residue that he calls mentality or native intelligence. He says that it is innate, a conclusion with which, granting all of his previous assumptions, it would be difficult to quarrel; and he sometimes implies that it is a unit character. He concludes that it can never be essentially modified by the experiences which he has assumed that it has acted upon and the products of which constitute his only measure for the thing itself. He is apparently convinced that it grows just as anatomical organs grow from birth to a very definite point that varies among individuals, but for most people a point fairly early in life, at which point like anatomical structures it "stops short never to grow again." This point, which seems to be almost purely hypothetical, has jumped back and forth over the chronological ages between 13 and 18 like a veritable grasshopper, displacing by several degrees at each jump the

IQ's of all individuals who have passed the age in question. But whenever the growth stops, whenever this hypothetical native mentality matures, there suddenly appears an abrupt restriction of the further educational possibilities of the great masses of people. Its essential nature for these people never changes; whatever it is, they have so much of it and no more. For the chosen few, however, further education is not only a possibility but the very hope of civilization. By this time the factor, which originally was ability to learn or "take education," has become ability to "deal in abstractions." A little later, through some alchemy, it becomes "initiative" or ability to solve new problems. Finally, it emerges into a full-blown capacity for "leadership."

Armed with this simple formula, the determinist now starts out to make over education. And this leads me to another tendency in the inferences that he draws from his assumptions. I quote from a book on intelligence published in 1919:

"The relative permanency of the IQ enables us to predict with some degree of approximation the mental level a child will attain by a given age." "Facts have been presented which show that the limits of a child's educability can be fairly predicted by means of mental tests given in the first school year. By repeated tests these limits can be determined accurately enough for all practical purposes by the end of the child's fifth or sixth school year. This early, at least, vocational training and vocational guidance should begin[1]".

We have here a clear tendency on the part of the determinist to limit the general education of a presumably large proportion of children to what can be given in the first five or six years of school life.

What is meant by the "limits of a child's educability?" Does this imply the point at which the hypothetical factor called native mentality or native intelligence stops growing? Assuming that this is the meaning, are all channels of education then permanently closed? The determinist will say, No; not that. But, he will insist, all channels of *intellectual* education are essentially closed to large numbers of people when certain predictable limits have been reached.

Personally I venture, again with due humility, to suggest that, even granting his hypotheses, the determinist has not taken into account all of the possibilities. Suppose we assume the definite and limited endowment of mentality that lies at the basis of the determinist's inferences. Are there not clearly two kinds of mental growth that may be predicated? One is the natural growth of the capacity from birth to the time when it stops increasing in magnitude or power or ability or "grasp," or whatever it is that comprises its prime essential. But all this time it is busy acquiring experiences by the very assumptions that the measurements involve. When it has reached this maximum does it suddenly cease to function? And is not the growth that takes place thereafter essentially "mental" growth? If you agree, let us call that kind of growth for the sake of the contrast, "horizontal" growth, and let us call the natural growth of the function itself, "vertical" growth. Now for the sake of the argument I will grant that vertical growth is limited if you will grant that the possibilities of horizontal growth are essentially limitless.

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[1] Terman, L. M.: "The Intelligence of School Children," Boston, 1919, pp. 157–158; p. 269.

I should like to continue this figure a little further. What do we mean by *intellectual* growth, for here I wish emphatically to assert, *the great issue lies.* By intellectual growth the determinist means, I am sure, increased capacity for dealing with experience in those compact forms that we call abstractions, abstract ideas, or concepts—the materials, in short, of those processes that we call conceptional thinking. Is this kind of growth possible on these horizontal levels? What are the facts in the case? Take a man whom you would find by your measurements to be of average or even somewhat below-average mentality—the "common man," in short— the *Homo ubiquitus* whose educational opportunities I am attempting to safeguard. Take this man in his daily business. Does he not grow in his power to deal abstractly with problems as he becomes increasingly familiar with them? I assert most emphatically that he does. I further assert that *with the proper kind of instruction* he can be taught to deal with many of the abstract problems that the determinist has in mind when he proposes to exclude everyone except the high IQ's from the privileges of secondary and higher education. The question as to whether society can profitably undertake such an educational enterprise I shall consider in a moment when I shall prove to you that society either must undertake it or perish.

Before considering that problem, however, I wish to dwell a little on this cool proposal to separate the sheep from the goats at the close of the sixth school year. With the constancy or persistence of the IQ still in doubt the edict has gone forth that, "for all practical purposes," it is safe to predict a child's future at the age of twelve. It is "safe," in other words, to stamp a twelve-year old child with the brand of permanent inferiority. It is "safe" to neglect the broader education of mediocre and dull children, to let them be satisfied with a narrow specific training that will fit them only for routine work, and to reserve the higher privileges for the "gifted" children. With his instruments of selection admittedly faulty, with his measures that measure something that no one has yet been able to define, the determinist proposes this policy and seeks to justify his proposal on the high grounds of social welfare and especially of social progress. May I observe that the high grounds of social welfare and social progress furnish the physician a much better justification for letting the weak die than they furnish the teacher for abetting the determinist's policy? The analogy has some useful lessons. The determinist talks loudly about his "facts." The *facts* with which the physician was long familiar would have justified him in the belief that the development of his art, by preventing the elimination of the weak, would work toward the deterioration of the race. But the physician knew that all the facts were not in—and pending further light on so important a matter he trusted to his ideals. He went right on developing his art and saving human lives without stopping to ask whether society would not the better profit by their extermination. And with what result? The average life space has been increased, misery and suffering have been reduced, and if there is any evidence that the human species has deteriorated under this humane ideal, it has not as yet been presented.

I submit that the facts are not yet all in with respect to this crucial problem which the determinist has essayed to solve out of hand and almost overnight, and I further submit that hypotheses based on so confused a mass of facts as those already available should be held in abeyance were they ten times as plausible as are the determinist's theories of today.

I come now to the most fundamental tendency of the theories which the determinist has constructed, again not on the basis of his facts, but upon the basis of his assumptions. I refer to the inevitable application of his inferences, with all of their questionable logic, to the theory of democracy and to the ideals of democratic education.

Here the professional writers are fairly wary and circumspect. They are not anti-democratic. Far from it; only democracy does not mean what most people have believed. Intelligence is not everything, they assure us; it is only one of the many innate traits that condition achievement. A person may have a high degree of intelligence and still be a failure in life; or he may succeed on a fairly slender margin. Of late, too, the determinist has discovered that the inescapable differences in native intelligence fit in admirably with our industrial development. If automatic machinery provides gainful occupation for the predetermined human automaton, the evils that Mr. Pound and others have conjured up regarding the Iron Man of modern industry become of trifling significance. I have not yet seen this suggestion extended from modern industry to modern art, but it might well be. I refer not chiefly to futuristic painting or to free verse, but to the modern universal drama of the screen where, more emphatically even than in modern industry, the moron seems to have come at last into a real kingdom.

Equity of opportunity, then, is the only real democracy according to the determinist. Give every child opportunity, he says—opportunity to develop precisely as his original nature dictates—this one into an artisan, that one into an artist; this one into a machine operative, that one into a "captain of industry;" this one into a clerk, that one into a "merchant prince;" this one into a teacher, that one into an "educator." The determinist is very skeptical about the possibility of teaching some lessons; but he apparently has no doubt that one lesson can be effectively and universally taught. Every man, he nonchalantly assumes, can be taught to know his own place, appreciate his own limitations, and mind his own business.

But if the professional determinist is very careful to assure us that his hypothesis are not at all anti-democratic in their tendencies, this is not true of at least one lay student of the problem. Mrs. Cannon, in the article already referred to, frankly entitles her discussion "Democracy in Question: American Misgivings." Personally we prefer this frankness to any attempt to camouflage the issue with finely spun distinctions between equalities and equities. No one could ask for a more straightforward statement than the following quotation represents:

"Nothing is more obvious than that the differences in ability to take education are as extreme as the differences in intelligence itself. . .

"The subjects basic to a civilized community life must be given alike to all: the three R's, some knowledge of the ideals of a form of government such as ours, and the duties and responsibilities of citizen ship therein. But beyond the earlier ages of education, is not the community entitled to a pretty rigorous policy of selection? . . .

In any country, is not education necessarily a process of establishing a group trained for greater responsibilities than the average? . . .

". . . Educational processes are helpless in the face of native incapacity. Not more than a pint can be poured into a pint receptacle. . . . For our own sakes we must select our best for the types of training that demand a high order of ability."[1]

It is salutary to look the problem thus squarely in the face. If the determinist is right, the ideal of democracy is wrong; the forces that have resulted in a democratic social order are forces of social involution and not of social evolution; the educational aims and ideals that have gone hand in hand with this social involution and which have assumed the possibility of insuring a certain kind of equality among humankind, are a tragic, even a ghastly, mistake. The determinist talks loudly and frequently about wanting the truth. If he is right, this is the truth and he should not try to evade it.

Let us come then to the real issue; namely, the need of democracy for a high level of trained and informed intelligence as a basis for collective judgment and collective action. We cannot dodge this issue by saying that those who cannot readily "take" this kind of education may take some other kind that is far better for them individually. This may be true but let us not deceive ourselves by calling it democratic. It is not democracy as a theory but as a stupendous fact that education must consider. *The development of democracy has been unquestionably toward the elevation of the common man to a position of supreme collective control.* Within a century in our own country, the franchise has been made universal. Our government is a representative government in form; in fact, it is coming every day closer to a type of direct government controlled by the great masses of the people. It is this variety of democracy that has lately spread through the world. It is this variety of democracy that was imperiled in 1914 and saved in 1918. *It cannot now be a question of going back to an earlier form of social control.* It is now, as it has never been before, a "race between education and annihilation." If education is to save civilization it must lift the common man to new levels—and not so much to new levels of industrial efficiency as to new levels of *thinking and feeling.*

What has the determinist to propose in place of this program? He would apply his intelligence tests to discover the future leaders. Having thus selected them in advance he would give them every advantage and stimulus to turn their native abilities to the benefit of society.

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[1] *Atlantic Monthly*, February, 1922, p. 155.

I shall not dwell upon perfectly obvious obstacles in the way of this solution. It would be easy to show that an intellectual aristocracy is just as reprehensible as is an aristocracy based upon family or upon wealth and perhaps even more likely to arouse the resentment of the "common man." Nor shall I worry much over the contention that the future "leaders" whom the determinist would select now and train for their future responsibilities should have such training in order to sensitize them to the responsibilities that they must assume. With no fear of contradiction, I can affirm that the safest guarantee of sincere and responsible leadership lies in a level of informed intelligence among the rank and file that will enable the common man to choose his leaders wisely, scrutinize their programs with sagacity, and, in the pungent slang of the day, tell them "where to get off" when they go wrong.

The proposal to apply the intelligence tests in selecting at an early age those who are to be the later leaders of the nation has received a sanction, and in my humble judgment a most specious sanction, from the unquestioned success of the tests in the Army. In picking out the men who are better able than their fellows to learn new duties quickly, tests which measure this capacity have an obvious value. In how far these men owed their superiority to inmate traits and in how far to education, we have now no certain means of knowing, although the determinist is as usual cocksure that education had nothing to do with it. Be that as it may, to argue from the situation in the Army to the situation in the nation as a whole overlooks a very important difference. The personnel of the Army does not choose its own leaders; the personnel of the nation does. The personnel of the Army does not pass final judgment on the plans and policies that the Army seeks to realize; the personnel of the nation does. If a generation hence we were to engage in a war and if our army at that time were to be democratically organized, choosing its own leaders and formulating its own policies, plans, and campaigns, what would be the best way to get ready for that war? I venture a Yankee guess that, if we loved our country, we would move Heaven and Earth to give the rank and file of that future Army all the information, all of the training in thinking, all of the bases for a wise selection and a keen evaluation of leadership, that we could find and organize, and we would mobilise all of the teaching talent that we could discover and train and develop it with an earnestness and a lavishness heretofore undreamed of.

There is, however, a factor connected with this matter of "leadership" that merits the most serious attention. The qualities that make for democratic leadership, far from being exclusively intellectual qualities, are not even predominantly so. They are rather "human" qualities, such as sympathy, tact, humor, and sociability, and "moral" qualities, such as integrity, persistence, courage, industry, and loyalty. Men and women of average or below-average mentality may possess these qualities in such abundance that they become leaders inevitably. It is of the greatest importance to society that these men and women be prepared through education for the responsibilities that will devolve upon them whether they will or no. One of the best known, most successful, and most highly respected men in the world today is prevented from doing his maximum for the common good because he lacks the background that a high-school education could have furnished. He has moral and personal qualities clearly unexcelled by any man in our national history except Lincoln but he apparently has lacked Lincoln's ability to make up for early educational deficiencies through private study. In the face of a tragedy like this are we to indorse a policy that would deliberately choose the future leaders of our people on the basis of native mentality alone?

Now we hope not to have another great war; and if we do we shall probably not fight it with an army such as I have described. But our people tomorrow, a year from tomorrow, ten years from tomorrow will be facing and trying to solve problems compared with which the greatest military campaign is child's play. And those problems must be solved under the guidance of leaders chosen by the rank and file and through programs that are constantly subject to evaluation, to revision, and to rejection by the rank and file. And yet because some difficulties stand in the way of preparing the great masses of the people to interpret these problems intelligently the determinist proposes to chuck overboard the democratic ideal of education; to substitute a deceptive "equity of opportunity" for a whole-hearted effort to bring the masses of our children up to a reasonable intellectual standard, and to devote educational efforts to the training of leaders the great majority of whom, under an ignorante lectorate, would fall to a quick defeat at the hands of the demagogue and the political machine.

The determinist's skepticism of the influence of education reminds one of the dilemma in which dialectic left the Greek philosophers with regard to the possibility of motion. If a body is to move from position *A* to position *B* through intervening space, it must first traverse half the distance; but before it can do that, it must traverse half of this first half; before that, it must traverse half of the quarter; and so on through the infinite halvings of the endless remainders. How in the world, then, is a body ever to get started? We are told that this problem remained unsolved for a matter of two thousand years or more. There is no record, however, that bodies remained patiently motionless until the theoretical obstacles in the way of their movement had been removed.

The clear tendency of educational determinism, is to leave us with a negative philosophy of education—a collection of statements regarding those things that the school simply cannot do. That it can do anything except certify as to the presence or absence of certain inmate abilities seems about as impossible from the point of view of this philosophy as movement was to the old dialecticians. And yet, as we have suggested, bodies actually went on moving in spite of the theoretical bonds that held them stationary. And in spite of the educational determinist, boys and girls on all but the very low or subhuman intelligence levels learn with varying degrees of rapidity some extremely difficult and involved skills, such as reading, writing, and computation, and master with more or less anguish of soul some fairly abstract conceptions like the form and motions of the earth, the principle that taxation without representation is tyranny, and the various complicated notions about money that is paid for the use of money. Causes and explanations that the brightest minds sought for in vain during long generations and which were finally laid bare only through the most laborious researches of the keenest intellects are now comprehended with tolerable clarity not only by superior minds of the race but literally by the multitudes. Natural laws that a Galileo, a Newton, a Helmholtz, and a Darwin were alone competent initially to grasp and formulate are now made the possession of vast numbers of men and women. The nuances of human character that first required a Shakespeare for their detection and portrayal can now be recognized and acted upon by the common man.

I make no absurd claim that if I teach a common man the principle of gravitation, let us say, I am making the common man equal to Newton in originality, acumen, alertness, or whatever other qualities made Newton one man perhaps in a thousand million. I do maintain that I have enabled this common man to participate in a very real measure in the experiences of one of the most gifted men of all time; I maintain that I have given hime on control over his environment equal in a substantial way to that which this gifted man himself possessed; and I maintain that in *respect of this possession* I have made this common man the equal of all others who possess it. There are undoubtedly some men who could never grasp the principle in question, but I should wish to refine my teaching processes far more than teaching processes have yet been refined before reaching any fatalistic conclusions as to where the line is to be drawn.

I have spent much time in reflecting upon the meaning of those alleged differences in native mentality that spread themselves so symmetrically over the frequency surface, and which are so conveniently translated into the numerical scale of intelligence. In order to be sure that I should not misinterpret the implications of this scale I asked a recognized authority in the field of measurements certain questions regarding the scale in common use. I asked first whether the mode clustered about IQ 100. He replied that it did. *Homo ubiquitus*, it seems, ranges from about 85 to 115 on this scale. Taking a common man at 100, I asked where the idiot would fall. I was told that 40 is a fairly low point. In answer to another inquiry, I was confirmed in my belief that the IQ 160 represents the bright and alert individual that we find occasionally among our fellowmen. I then asked this question, "Is the common man separated from this bright and alert fellow by the same chasm that separates him (the common man) from the idiot?" The reply was, "Yes; the differences are the same, but they are not so visible in the former case." Now this "low visibility" oddly enough is the illumination of a glorious light. Certainly the common man is separated from the idiot by an impassable gulf; yet to even the most brilliant of his fellows he is bound by a thousand ties.

Grant differences in native mentalty? Certainly; such differences are inevitable. It is not their existence but their meaning that we are concerned with. What the determinist has forgotten is that resemblances in ideas, ideals, aspirations and standards may and do unite men by bonds that are vastly more numerous and significant than are the differences in native endowment that would otherwise pull them apart.

The great mistake of the determinist has been to confine his thinking to organic evolution; he thinks only of the forces and factors that governed progress from the dawn of life to the dawn of mind. He forgets that with the dawn of mind new forces were let loose which transformed the entire character and course of progress. He forgets that with the dawn of language still other forces were let loose—for from that time on the common man was able to share the thoughts and feelings of the most gifted of his immediate fellows. He forgets how this great force of common experience was immeasurably broadened and strengthened by the art of writing and the art of printing which made it possible for the common man not only to enter into the experience of his immediate fellows, but almost literally to stand upon the shoulders of all the tall and sun-crowned men who had gone before. He forgets that the development of the universal school is the latest act in this great drama of social evolution. It is doubtless true that the school cannot increase the sum total of mentality, but it can and does increase the sum total of trained and informed intelligence. There are indeed, many good reasons for believing that the general level of native mentality has not been raised significantly during the entire period of recorded history—but something has surely been happening during those six or seven thousand years.

Personally I have still to be convinced that this process of social evolution will disappoint the world in its rich promise to bring humankind into a real brotherhood. What education has already done is only a feeble portent of what education can and will do as its forces become better organized and more keenly alive to their tremendous possibilities and their tremendous responsibilities. If I have seemed not to be cognizant of the great services which intelligence measurements have already rendered and of the still greater services that they will render in the future, it is very far from my design. For everything that is positive and constructive in their teachings there will always be a warm welcome. For whatever they have to present that is negative and destructive they must clearly assume the burden of proof. We should be false to our trust, false to our ideals, if we did not take and hold this position. The truth we must all face, bitter though it may be—but we have a right to be sure that it is true before we are asked to swallow the pill.

The determinist admits that skillful and devoted teachers can do something even with morons. As I watch these teachers at their work it is not what they cannot do that impresses me, it is rather the miracles that their consummate art enables them to perform. I have seen dull eyes lighted with a momentary gleam of intelligence. It was a little light in a world of darkness. But grant just that little light glowing with rapidly increasing intensity as we go up the intelligence scale, and my case is won. A little more light for the common man this year, next year, a hundred years from now and the battle for humanity, for democracy, and for brotherhood is won.

WHAT'S WRONG WITH THE SCHOOLS[1]

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I

There are many things that are wrong with our schools today; and there are many things that are right. Our systems of education, like our systems of government, our systems of medicine, and our systems of economic production, are in a state of rapid evolution. In some respects, and in spite of much good will and strenuous effort, that evolution has gone wrong. It can be shown that education, like agriculture or national defence, is, in some of its phases, not so much wrong as simply retarded. In some other phases, however, it suffers, as do sometimes politics based on political science, from excess of so-called progressiveness.

Probably the most prolific source of "wrong ideas" regarding education today are the persistent efforts of friends and foes alike to find and to use catchwords, inclusive formulæ, and undefined generalizations as means of doing battle for their hobbies or against their pet antipathies. In a democracy where all men are assured equal opportunities to think, speak, and write upon the numberless questions that lie in the broad twilight zones between generally accepted knowledge and the regions where the darkness of total ignorance bars the way to all but irresponsible speculation, public institutions must constantly pay the penalties of having their purposes, their methods, and even their accomplishments often only half understood, and sometimes wholly misunderstood. But it is thus that progress comes—no less in politics, social economy, and even theology, than in education. "Whom the Lord loveth he chasteneth" runs the old adage. What democracy loves it ceaselessly keeps stirred to vigorous life, here by the whip of stinging criticism, there by the blandishments of too lavish commendation.

Unfortunately these methods of democracy are often wasteful in the extreme. Especially in those eras of transition from ages of faith to ages of science through which, sooner or later, all institutionalized forms of social endeavor must pass, are they ill-calculated to produce continuing and decisive progress. They give too much heat, too little light. Medicine has so largely emerged from its ages of faith that few laymen now undertake to solve its problems in forum and newspaper. Agriculture has been emerging for some years and is now solidly established as "a science."

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[1] The above subject was set by the Philadelphia Forum for discussion (January 5, 1922) by Glenn Frank, Arthur E. Morgan, and the present writer. The appended paper embodies the writer's essential contentions presented on that occasion.

But education is still, like the tariff, taxation, and foreign policy, the pet or demon of magazine writer, retired business magnate, or amateur philosopher. Sooner or later every man of active mind invents or adopts one or more pet theories, first as to what education should be, and, by inevitable consequence, what education is *not* now—even when the only realistic first hand experience he has had with education derives from the schooling of his boyhood.

It would be folly to expect correction of these clumsy methods of popular discussion through the use of new methods at the present time. The sciences that are basic to the purposive education which we shall eventually have—the psychology, sociology, perhaps even biology that must be the foundations of that education, even as physiology, chemistry, and bacteriology are now the foundations of scientific medicine—these sciences are themselves as yet so imperfectly developed that they serve more effectively towards suggesting and stimulating further effort than in actually guiding the work of educators.

But much can yet be done by refining upon old methods, and especially by refusing to yield to the seductions of easy generalizations, doctrinaire formulæ, and obedience-compelling dogmas of all-inclusive character. Clear thinking presupposes, within limits, analytical thinking. Sweeping conclusions may be partly justified by analytical study of the processes by which they have been reached, or else their illusive character can be exposed. Even that very general and very complex question "what is wrong with education" is capable of being analyzed into simple elements, some of which will even now readily permit of profitable study and critical valuation. And it will materially help our inquiries if we confine them successively to certain age-levels through which young people pass from the infant stages of the primary school to the maturities found in liberal arts and professional college.

II

From seven to eight million children between the ages of 6 and 9 are in yearly attendance upon American primary schools or grades.

There is nothing fundamentally wrong with the schooling which these children now receive. Their teachers are often very young, and some of those not young are nevertheless incompetent; but, measured by standards of actual needs or demands, it is probable that there are just as large proportions of immature and inefficient physicians, lawyers, legislators, engineers, and nurses in this country as there are immature and inefficient primary school teachers.

These teachers have their work reasonably well in hand—again as compared with workers, by and large, in other fields. They are expected by parents and the state to train their pupils in reading, writing, spelling, and simple numerical operations. These tasks they accomplish by methods that have seen much improvement in recent years. The little children whom they control, instruct, and train, are not seriously worried, overworked, or deprived of ample opportunities for normal childish growth during their school time.

But the modern primary school does much more than train in the "school arts." Quite generally it now instructs children towards at least some simple practices of hygiene; it brings them into contact with substantial amounts of reading more varied and attractive than that contained in the customary textbooks; and, helped by the phonograph, it has lightened school days with music. The disciplinary control of these children, whether in primary class room, or in the lower grades of the more heterogeneous one-room school, is not now the severe and formidable process it once was—if personal reminiscence, story, and occasional record are to be accepted as true. That control is doubtless often dull and stupid, as are, not infrequently, the social life of homes, churches, festival assemblages—but it is now very rarely cruel or malevolently repressive. The atmosphere of the typical primary school is certainly no less pleasing and attractive than is the atmosphere in other places where in our democracy the mature and the immature foregather to serve each other—households, temples, court rooms, shops, and streets.

The primary school was once largely a place of burdensome tasks and its inmates wore an habitual air of doing penance. It is still a place where children must work and learn to work; but it has become something much more. Barring the exceptions found in all human agencies, it is now a place where a large variety of the processes of natural growth—physical, social, and aesthetic, no less than intellectual—are aided and directed. Our little ones are, indeed, required, and rightly, to give from 1 to 3 hours daily to fairly rigorous drill in reading spelling, and arithmetical tables. But they also have wonderful stories read to them; their imaginations are stimulated by pictures; they dance to phonograph music; and in numberless other ways their lives are enriched by new, even if, from a highly sophisticated standpoint, somewhat thin and denatured, intellectual food.

There is, then, very much that is right rather than wrong today in the staple schooling of those of our children who are from 6 to 9 years of age. It is, of course, the least complex of all fields of education, at least insofar as civilized society is yet prepared to make conscious demands. There are, indeed, many new aspirations afloat. The kindergarten, concerning itself at first chiefly with children of still more tender years, has greatly affected the aspirations, if not the practices, of primary education. Not a few of today's bolder spirits in educational reform would like to see the methods and the purposes, of the primary schools modified in almost revolutionary degree.

But the proposals and experimental ventures of these radical innovators are still very much on trial. To critical minds some of them exhibit too palpably the stigma of gigantic fads. Some of them rest, like analogous movements in healing, economic reform, or aesthetic expression, altogether too heavily on postulated mystic attributes in human nature. The philosopher who gave the world the kindergarten so overloaded its underlying theory with mystical assumptions as to the practicability of making angelic silken purses out of the biological sow's ears of human nerve tissue as to make his educational metaphysics the despair of practical educators ever since his day.

If their pedagogical claims were not so ambitious, it would be easy to commend some contemporary ultra-modern educational movements very highly. There are private "play schools" which now assemble for wholesome cooperative activities of various sorts, young children from homes of wealth, complexity, and, not infrequently, loneliness. Like summer camps for adolescents these socalled schools may not necessarily be better than the combination of good homes and ordinary schools falling to the lot of many normally circumstanced children; but they may easily be very much better than nurses and governesses directing the daily regimen of children of exceptionally good heredity but condemned to the excessive nurture and artificial surroundings of a typical fashionable urban home.

But the zealous promoters of some schools of this kind easily come to have fervent faiths in one or several types of educational magic—forgetting perhaps how much there is that could easily be mistaken for magic in the physical, social, and intellectual growth of young children wherever they find themselves in any degree favored by a nurturing environment of open air, rich earth, sunshine, companionship, and freedom from fussy controls.

The further improvements of primary education in America are not to be realized through discoveries of new magic or anything else revolutionary. They are to be achieved principally by building higher and better on foundations already laid and in accordance with plans now fairly well defined in the practices found in more than half our schools.

III

What's chiefly wrong with our education of children from 9 to 12 years of age? Conditions here certainly seem less satisfactory than in the lower age group. Probably they are not, on the whole, at all bad for those favored children who combine good home environment with good native ability. But during these years retardation and other forms of wastage of childhood seem very pronounced in the cases of all children of inferior native ability as well as of even the talented ones who come from unfavorable residential environments.

Throughout the intermediate grades wherein are found nearly all children from 9 to 12 years of age and not a few of those from 12 to 15 years of age we seem still to be badly hampered by confusion of fundamental purposes. Manifestly these are years of very rapid growth—physical, intellectual, social. Hungers for experiences outside the small circle of the household are proverbially keen, searching and capricious. Modern pedagogy insists in theory that the school should minister in wholesome fashion to these compelling appetites for new experiences; but teachers are as yet given very little practical support in ways and means adequate to these broader ends.

In the meantime both the old and the new pedagogy combine to lay upon the school the prodigious tasks of fitting for a civilized social order these children, a large proportion of whom have strong natural propensities to remain on the levels of barbarism. All children from 9 to 12 years of age are now expected to attend school from 700 to 1000 hours per year. In many classrooms these hours are filled with tasks in arithmetic, grammar, composition, geography, reading, and writing. In others there are sandwiched into the program fragments of music, drawing, hygiene, nature study, industrial arts, morals, and manners, and even art appreciation. In a large majority of schools great advances have been made in recent years in expanding and enriching the fields of general reading to which even the less able-minded children are introduced. A few schools, under some especially stimulating leadership, have been able to establish connecting links with pupils' home and street environments in such a way as successfully to teach thrift, new and wholesome kinds of physical games, and the beginnings of youthful participation in the civic responsibilities of the neighborhood.

These active children who give from 700 to 1000 hours yearly to their schools (and teachers now generally admit the futility of trying to force them to study during out-of-school hours) have from 2500 to 3000 hours yearly during which, wide awake and intensely dynamic, they are incessantly active in ways that minister, as nearly as they can make it possible, to their natural desires for growth. This growth is, obviously, a very complex process, or rather it is a very complex series of complex processes. It has its physical, its moral, its intellectual, and its aesthetic aspects. Much of it is achieved through new impressions, but much of it also results from endlessly varied expression and concrete performance of innumerable activities. It utilizes in myriad forms old instincts of fear, jealousy, combat, domination, craftsmanship, curiosity, and loyalty. To the genetic psychologist its numberless "small group" cooperations, competitions, plunderings, fictions, and conventions are always reminiscent of those hundreds of thousands of years in the evolution of our species during which our ancestors moved ceaselessly over the surface of the earth in small hordes, wresting livelihoods from a reluctant nature as yet unsubdued by tools and science.

The sum-total of the processes of education in its broadest sense for children from 9 to 12 obviously includes not only what is done in the school but the numberless growth-affecting, self-educative, home-educative, and street-educative processes outside the school. But what, exactly, are the desirable and practicable functions of the school? It is charged primarily with responsibility for *civilizing* these primitives —or rather of so preparing them that in later years they can be acceptable for civilized society. Some homes, but not all, consciously join forces with the school in this work. Some neighborhoods cooperate, some do not. Some children the school finds it can shape to its requirements very easily, whilst some are nearly as intractable as those wild animals that utterly refuse to be domesticated.

That which is now chiefly wrong in the schooling of children from

9 to 12 is failure to make clear-cut and effective discrimination in courses, in curricula, and in daily practice between those very tangible purposes in such education which involve specific and positive training towards the requirements of later school and civic life, and those other purposes which primarily involve the furtherance and right adjustment of contemporary growth processes. Possibly the formal, relatively hard, school *training* subjects should be reduced in quantity. Certainly they should be made more scientifically purposive, and minimum essentials should be very clearly defined.

But of even more importance is the effective differentiation of these purposes from those others, of comparatively modern acceptance, that are concerned primarily with the physical, moral, intellectual, and aesthetic development of children. It is well for urban children that the schools should support and enrich opportunities for physical play, such as games and sports of all kinds. It is well that both urban and rural schools should minister wholesomely to the natural appetites for story, picture, song, and manipulative experience with tools. But it is not well that they should confuse these development-aiding objectives with the objectives of training towards specific ends of correct English, good writing, and effective command of essential arithmetic as these are dictated by the anticipated needs of adult life. It is just such confusion that is paralyzing the efforts of many excellent teachers today.

IV

What's wrong with our schools for children over 12 and under 15 years of age? Many things—more perhaps than in any other area of school attendance.

Only within recent years have we compelled all children of these ages—the dull as well as the bright, the unwilling as well as the willing—to attend school. Only within recent years have we seriously attempted to make their education something more than a dreary treadmill of grammar, history, and geography, learned by rote in the intervals between work in abstruse and unreal problems in arithmetic.

Few boys and girls over 12 years of age have ever been genuinely at home, educationally speaking, in our one-room rural schools—and it must not be forgotten that until recent decades the vast majority of all America's children were in these one-room schools. It has become a tradition that in these little wayside schools American leadership was formerly, in large part, nourished. The tradition rests on some foundations of fact, since it usually happened that the more intellectually inclined youth of the community, especially if inspired by devoted and zealous mothers, extracted all the learning and inspiration they could from the motley processions of teachers which passed term by term through these schools—an occasional rough diamond, not infrequently a vile mountebank, and commonly only youths, or disillusioned elders, of more than doubtful competency.

Even our urban elementary schools have been at best but poor agencies of instruction and training for boys and girls upward of 12 years of age. Nowhere else among nations with well-developed school systems is it customary to assume that one person can teach "all subjects" to pupils of these ages. Nowhere else is the dividing time between elementary and secondary schooling so long postponed as in America. And, incidentally, it should be noted that nowhere else is the total schooling of boys through the years of puberty entrusted so largely to women teachers.

The evil inheritances of a graded system with its inflexible curriculum and uniform routines, oblivious alike to the widely different powers, unlike environments, and varying prospects of children is now being corrected in all progressive centers through the substitution of the junior high school form of organization for the historic "graded" system. But the junior high school has thus far achieved only administrative independence. It has acquired little inspiration, and even less light, as yet, on the problems of using that independence to the best interests of the hundreds of thousands of boys and girls between 12 and 15 years of age who, even now, can participate in its advantages.

The difficulties encountered in devising courses of study for the junior high school are in part like those referred to above in the case of children of 9 to 12. Our theories of educational aims are at fault. What should the schools seek to do for these children? In some respects, indeed, the experts are substantially agreed. No one doubts that between the ages of 12 and 15 all our boys and girls should be steadily improved in their abilities to speak, read, and write the mother tongue; or that they should steadily build up stores of serviceable knowledge of hygiene, geography, American history, and civics. But how shall *quantities* of learning under even these subjects be determined? Scientific inquiry now proves accurately what ordinary observation had long surmised as to the varying inherited abilities of children. Only a few are born with gifts of great native intelligence.

A certain percentage, large or small, according to the standards of comparison employed, possess abilities so inferior that only by the most painstaking effort can they be further educated after 12 years of age. But the majority are not far above nor far below the average in talent and promise. The best of these can get into and through the high schools, as at present standardized, only if they are carefully helped. The worst cannot possibly complete high school courses.

Factors of home environment, of vocational interests, and of life prospects enter in to render problems of curricula complex and uncertain. Small wonder that forward looking educators have sought new principles of guidance. Some have found the pleasing word "prevocational" suggestive of a variety of promising leads. Recognizing that many boys and some girls, even of less than mediocre abilities, do manifest a variety of interests in manipulative activities during the years from 12 to 15; and convinced that a majority, at least, of these are destined to become bread-winners very soon, they have decided that the junior high school period should enable the learner to "find himself" especially in a vocational sense, and that his constructive interests, particularly if he belong to the lower half in bookish intelligence, should be stimulated and directed.

Others have seen in the junior high school opportunities to hasten the entrance of the learner into, and progress through, the historic secondary school studies. We have heard much about the "lost 2 years" inflicted on American youth by our prolonged elementary school curriculum. Unfortunately, secondary education is still chiefly conceived by these progressives in terms of foreign languages—preferably the ancient—and the mathematical pair, algebra and plane geometry.

From other quarters come large, even if in a measure more vaguely aspirational, demands on the junior high school. "Why not" we are asked "give these precious years of transition from childhood to young manhood and womanhood, from the play-time to the work-time of life, to those larger educational purposes of health, citizenship, and personal culture, without which the bigger and better America of which we dream is not to be realized?" "Take a lesson from the history of boy scouting" we are urged. "They have found ways and means not only of attracting and holding the most dynamic of boys, but they have learned how to incorporate into one composite program means and methods of helping growth towards, as well as direct training in the things that make for, better bodies, better morals, and better culture."

These early adolescent years, we are assured, are the precious seed-time for ideals, appreciations, insights and attitudes of many valuable kinds. "Develop a pedagogical program great and rich enough to use the world's best literature, art, science, and history as means of physical, intellectual, social, and vocational nurture"—thus the most inspiring of our educational seers.

But all this leaves the educator of today—whether he be teacher or administrator—badly at sea. Traditional standards and methods are still strong. The new ideals are only occasionally capable of being translated into practicable and economical programs. The old is not dead, the new struggles yet to be born. What's wrong with education of American children from 12 to 15 at present is uncertainty of purposes combined with embarassing burdens of new responsibilities.

V

What's wrong with our education of American youth from 14 to 18 years of age—the area heretofore alloted largely to our secondary schools?

First let us note that there is nothing wrong with the public's interest in high school secondary education. For 50 years high school attendance has been growing three times as fast as population. Today nearly two million adolescent youth, embracing substantially all young people of superior native abilities and from the better social environments, throng these schools. In most American cities and towns the finest and most modern buildings are not courthouses, hospitals, city halls or jails, but high schools. Of all our public school teachers, high school principals and instructors come nearest to having a true professional status in the community.

But there is much that is wrong, or at least retarded and defective, in the purposes as well as in the methods of the American high school. In spite of the fact that attendance has multiplied from ranks and conditions of society always remote in other countries, and formerly remote in this country, from any possibilities of more than simple elementary school education, the high school has remained at heart undemocratic. The controlling ideals of its social life, its sports, its curricula, and its standards are essentially aristocratic.

At 14 years of age substantially all American children are in school. At 18 fully three quarters of them, now young men and women, will have embarked on their life work. More than one half of all the boys and girls of any progressive town or city enter high school; but of these rarely more than one third remain to graduate.

Public opinion is seriously adverse to the wage earning employment of young people under 16 years of age; and openings for such work are becoming fewer. But modern industry and commerce is capable of absorbing and annually does absorb hundreds of thousands of youths of both sexes over 16 years of age.

What are then the outstanding defects of this institution for which the people have already done so much and on behalf of which they cherish such great expectations?

Three of these defects lie close to the surface. These may finally prove to be essentially derivative or secondary in character; but for the present they indicate the most promising directions for effective reforms. First, the high school is servant rather than master in its own house. Second, it fails seriously in adaptability to the varying needs of its student body. Third, it is now trying to "vocationalize" itself, with serious detriment to the legitimate aims of both liberal and vocational education.

The most visible affliction of our high schools is the absence of home rule—or perhaps it is a form of absentee landlordism. At any rate, high school faculties, from preference or necessity, are not masters in the domains of their own educational work. Higher institutions of learning very largely dictate the purposes and, as a consequence, the more significant subjects, of high school education, even for that large majority of pupils who do not finally enter higher institutions.

It is college admission requirements that compel our high schools to devote so large a part of their energy to instruction in mathematics and foreign languages—two departments of learning that are certainly of no considerable value for students who do not enter schools of collegiate grade. It is college admission committees that chiefly determine what shall be the content of the history, physics, and English literature offered to all high school students alike.

All these subjects, even as standardized by college committees who usually know little of adolescent youth, are good in the abstract; but as means of liberal education, they are usually good only for certain rare types of mental ability.

The American high school adapts itself but poorly to the varying needs of its numerous students. From 50 to 70 per cent of those entering it will not remain to graduate—some for reasons of economic pressure in their homes, some because of insufficient ability. Those who thus appear to drop by the wayside will nevertheless usually make strong and good citizens. But they will cherish few grateful recollections of their sojourn in the high school. That institution has usually rendered niggardly and ineffectual service towards the ends of what would be for them a genuinely liberal education.

The rank and file of Americans want their children to attend school up to 16 years of age. Only the prosperous can long continue the burden of supporting their children in school after that age. In other words, from 30 to 60 per cent of all our young people are ready for and want some secondary education, but are not able to complete a 4 years course. Students of this description compose from 60 to 75 per cent of the two millions now found in our high schools.

The high school is not, and should not attempt to be, for such students a vocational school. It should be essentially a public school of liberal education—not an aristocratic or leisure class liberal education, but rather an education towards the kinds and standards of personal culture and good citizenship suited to a democracy advancing its peoples toward higher twentieth century levels. As a school of liberal education it should, of course, have a rich program of studies and other activities suited to the favored minority of its students who can devote themselves for 4 years or longer to the acquisition of liberal education exclusively.

But it should offer no less rich programs for those of its pupils who can probably remain but 2 years, and who, at the age of 16 or thereabouts find it necessary, or for other reasons prefer, to embark upon vocational pursuits—either as wage-earning work, or as specific vocational training. It is in connection with this class that the American high school has made its most signal failure. For several decades now hundreds of thousands of boys and girls have been entering this high school of whom even half-competent social students could prophecy that they would and could remain but a couple of years. To these immature and inarticulate seekers after knowledge and inspiration, the public high school has offered—what?

What does the rich and aristocratic high school of the United States offer to these young people that is of genuine educational value? Little or nothing. They may desire bread, but they get educational stones, from an institution that has for half a century allowed itself to trail at the chariot wheel of higher institutions as far as objectives and standards are concerned.

For their liberal education they are given, first, under compulsion and with no alternatives, English composition and a very dry and formal type of English literature. Again, under compulsion and with no alternatives, algebra and plane geometry. Next, with some slight relaxation of prescription, Latin, or a modern foreign language. Finally, ancient history, physical geography, or, possibly, biology.

All of these studies are good; and possibly they are very good and even indispensable, as introductory approaches to more advanced or complex studies to be taken by students who have still years of schooling ahead of them. But are they calculated to be other than dried husks, if not nauseating messes, to those other pupils who must speedily terminate all school attendance in order to embark upon the responsible career of earning a living and advancing themselves further in culture and civic performance through the aid of newspaper, association in the market place, and self-directed reflection in leisure hours?

The third defect of the modern high school is its confounding of vocational and liberal education. In order to increase attendance, in order, as is often thought, more adequately to serve the needs of its weaker or otherwise less favored students, and perhaps in order to seem better to respond to local demands, high schools everywhere are developing so-called vocational departments or courses, or else are trying in not a few cases to "vocationalize" some of their traditional subjects.

Now no well informed man doubts that America is on the eve of an enormous development, under public support and control, of vocational training on secondary school levels. Already a large proportion of the higher vocations have their vocational schools of collegiate and professional rank. The social understanding of more thoughtful Americans has long appreciated the frightful wastage, as well as undemocratic discrimination, that results from denial of opportunities for systematic vocational training for the non-professional vocations—those that must be followed by the rank and file of workers on farms and shipboard, and in homes, factories, mines and stores. The only species of vocational education as yet widely distributed and fairly well developed is that for the stenographer-typist. Scores of experimental beginnings in other vocations are found but these are as yet far from having evoked popular enthusiasm and support.

Nevertheless the seed has been sown. Employers learned in wartime, if not earlier, to appreciate the possibilities of direct and purposive vocational training, sometimes for persons beginning wage earning at 16, but no less frequently for persons seeking vocational "upgrading" at 20, 25 or even 30 years of age. Federal funds alone now provide about $7,000,000 annually as subsidies for these forms of education—and as a result of legislation enacted in 1917 without a dissenting vote. The time is probably not far distant when our young people will, by hundreds of thousands at any one time, be given opportunity, after completing so much at least of general education as the law prescribes and so much more as, according to their abilities and circumstances, they can be induced to take voluntarily, to enter vocational schools no less purposive and efficient, even though perhaps requiring much less time, than are now schools of medicine, pharmacy, and engineering.

Not all of the young people entering such vocational schools will have completed a 4 years high school course any more than do similar young persons now complete such a course before entering upon wage earning employment. Perhaps many of them, obliged to become self-supporting at 16, will find it expedient to enter upon a "short course" of vocational training after completing only 2 years of high school work, if indeed their mental endowments permit them to rise above the level of elementary school education at all.

But many educators of academic prepossessions still imagine that this vocational education can be carried on as a part—and a minor part, they usually seem to hope—of an ordinary high school curriculum. They seem to be oblivious to the fact that in the one state of Pennsylvania, men and women probably follow at least 2,000 quite different vocations. They have not yet realized that, in order to be at all efficient, vocational training through schools must be integrated into productive processes hardly less than has been vocational education through apprenticeship. In fact they have not yet learned, in spite of the hundreds of successful demonstrations during 1917 and 1918, and in spite of many successful examples on the plane of those aristocratic vocations, the professions, what direct and purposive vocational training for the multitude of factory, mining, and clerical vocations really means in terms of specific preparation for high grade productive service.

The spirit of democracy and, no less, the spirit of social economy, both of which are steadily increasing their ascendency in American life, will assure the development, within the next few years, of widely extended systems of public industrial, agricultural, commercial, and homemaking schools for the rank and file of prospective workers. These schools will be costly in any case; but they will combine great costliness and deplorable inefficiency if they are not functionally integrated with the fields of employment for which they are designed to give preparation. Only under rare circumstances will it prove wise to locate them in high school buildings or even in those residence areas in which it is proper to locate high schools. The efficient vocational schools of the future must rather be located on farms, in mines, alongside of factories or merchantile establishments, on shipboard, or in railway yards, and business sections—wherever the work of the world is being done and where easy transition at any time of the day or of the year to productive work is possible.

VI

What's wrong with our higher institutions of learning—the colleges and professional schools that claim the intellectual and social elite of our young manhood and womanhood between the ages of 18 and 24?

Let us classify these institutions into three categories according as they seem to be, in their manifest purposes, (*a*) almost exclusively non-vocational; (*b*) exclusively vocational; or (*c*) a blend of these two.

It will readily be agreed that, as terms are now used, institutions of the type of Amherst, Barnard, Yale College and Vassar are non-vocational. Equally it will be agreed that normal schools, and colleges or schools of medicine, nursing, law, engineering, and the like, are definitely vocational. In colleges of agriculture, business administration, and teaching, aims appear often to be composite. The same is sometimes true in certain so-called universities where no sharp lines of demarcation are drawn between liberal studies and vocational studies.

There seems to be little public complaint of those purely professional schools and colleges that train for the relatively standardized higher vocations. Their purposes are, in the main, definitely established by public demand. Each specific type of school has, of course, its own peculiar problems of personnel, methods, and courses. Schools of theology, and of nursing, we hear, cannot attract as many superior students as they desire. Schools of medicine and dentistry are striving so to raise their standards that their graduates may be kept abreast of modern developments in these fields. Schools of engineering are disconcerted by the ceaseless specialization and new developments taking place in all departments of applied science. All kinds of higher vocational schools are, naturally, constantly concerned with the calibre and preparation of students seeking admission. Their faculties, in all too many cases, have not yet learned to distinguish the selective from the truly preparatory effects of the studies required for admission. They think that by requiring an additional year of college studies, or by insisting on stiffer requirements in mathematics and foreign languages, they will get "better prepared" students. The inauguration of such requirements will, indeed, usually be followed for a time by a general improvement in quality of the students admitted under them; but the result, it seems very probable to most students of education, is due much more to the "selective" function of the new requirements than to anything else.

Professional school faculties are prone, also, to cherish a variety of illusions as to the value to practitioners of the higher vocations, or to society through them, of extended liberal education. Professional men are, indeed, commonly drawn from among persons of best brains, best rearing, and largest natural dispositions towards altruistic service. In the simpler social life of former years the clergyman, the educator, the physician, and the lawyer, were, in a very real sense, the social and political leaders of the community. But that is no longer generally the case. In the large city of today, the ambitious dentist or physician probably takes far less active part in local politics than does the average real estate dealer. That lawyer or engineer who devotes himself conscientiously to his professional specialties may figure less in community affairs than the banker or the hotel manager. The educator ought to be a power in "public affairs;" but his professional work, his health, and his family have claims which may often absorb all his available time and strength.

The ultimate social usefulness of these men is not necessarily diminished, of course, by their professional concentration, unsatisfactory as this may appear when examined by idealists. An engineer whose duties absolutely shut him off from participation in community and state politics may nevertheless be of more ultimate service to society than half a dozen others whose professional responsibilities are such as to leave them much free time and energy.

Current efforts of higher vocational schools to impose uniform prerequisites of liberal education need reexamination in light of a more scientific understanding of relative educational values than has heretofore existed. These institutions have first claims, be it freely conceded, upon students of superior native ability. They can legitimately advise that as many candidates for ultimate admission as care to do so or can do so shall have covered half or all of a 4 years' liberal arts curriculum before commencing professional studies.

But they have little moral right to require those candidates for admission to professional degree courses who give good evidence of ability successfully to complete required work and to practice the profession with credit, to submit to compulsory liberal arts college work. They have a right to impose higher standards of ability, specific preparation, and even professional character if they can find and administer really efficient tests. But various forms of social disservice are very likely to result from blanket requirements of general college work as prerequisites to professional courses.

Liberal arts colleges, as contrasted with higher vocational schools, seem as yet far from having determined their objectives as these must be conditioned by the abilities and aspirations of their students and the demands of contemporary civilization. These objectives, it is clear, lie primarily in the fields of what are usually termed cultural and civic education. The liberal arts studies should certainly be those known in the broader sense of the term to contribute humanistic and scientific attainments as these may be valued by all superior persons quite apart from their particular vocational pursuits.

Nevertheless the literature of higher liberal education is strikingly deficient in clear-cut analyses of desirable and practicable aims. It is essentially an *aspirational* literature, abounding in vague generalizations and almost mystical interpretations. It seldom seeks to bridge the very obvious gap between students' interests and achievements in such fields as Latin, Romance language, mathematics, economics, history, and literature and the scholastic aspirations enunciated in commencement addresses and in essays on the values of "a college education."

The liberal arts college is indeed a delightful place of sojourn for 2 or 4 years. "College life" for those who can afford it and who can live up to its standards seems certainly to be an admirable thing. The fraternities, sports, the fashions, the lively parties, and the endless social intercourse permitted in American liberal arts colleges may by their seeming excess, cause the judicious to grieve at times, but their vitality and allurements none can dispute. It should prove of much significance in the history of liberal education that in recent years an increasing share of the revenues of the college, as well as of its faculty solicitude, are being turned to the supervision and development along approved lines of these numberless extra-class room activities.

Not a few speakers and writers on college education make the serious blunder of confusing the purposes of liberal and of vocational education. They defend the thesis that in some obscure fashion a college education "pays" its recipient, in an economic sense. There are, of course, some by-products of attendance on a liberal arts college that may eventually redound to the vocational advantage of the highly able-minded men and women who constitute the college population. Certain kinds of acquaintanceship, some forms of personal confidence—these are not infrequently realized.

But the liberal arts college is not an agency of vocational education, and, in these days of specialized productive service, it is less than ever practicable to make it such—even for that vocation of very "easy" standards, high school teaching! But all attempts of liberal arts college faculties to think in terms of vocational objectives simply confuses their perception of the true objectives and conditions of liberal education.

But this confusion, which is not serious in those smaller colleges that are necessarily non-vocational, has become a menace to higher liberal education in those numerous colleges and universities which are trying to "blend" vocational and liberal education. In state universities and numerous other institutions almost numberless courses are being offered which are designed in some vague and half-mystical way to serve the dual purposes of humanistic education and of preparation, direct or indirect, for vocational proficiency. It may well happen that the majority of students in such courses are more strongly actuated by vocational than by other motives. Under these conditions such courses soon cease to have any of the essential characteristics of courses that should minister to the ends of cultural and broader civic education. But, very commonly, they are not genuinely vocational—that is, they have not been projected and ordered towards the attainment of any clearly defined vocational goals. They are hap-hazard, and often unconsciously fraudulent, impositions on the credulity of those who, perhaps quite justifiably, are in haste to enter upon some one of the higher forms of productive employment.

The basic difficulty with non-vocational colleges and departments of universities is much the same as that referred to in the case of secondary schools. Their objectives are still largely traditional and are lacking in demonstrated validity except for those rare spirits who enter college with genuine higher intellectual and aesthetic interests already blooming. For all but these exceptional undergraduates grades and diplomas become ends rather than means whilst courses tend to be regarded as necessary evils encountered on the way.

The most immediately available corrective here would seem to be the differentiation of college courses into distinct classes according as they are designed to be scholarly or inspirational. Every liberal arts college student should, of course, take some courses designed to exact careful and prolonged study. No less certainly he should also be free to elect inspirational, culture-giving courses, admirable examples of which can still be found in spite of the obloquy which overtakes them under the elective system. By giving different *kinds* of credit for these two types of courses, one, at least, of existing obstacles to development of more vital work—or intellectual play—in liberal arts colleges would be removed.

SUGGESTED POLICIES FOR THE SUPERVISORS OF STUDENT TEACHING[1]

A. R. MEAD

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Last year in a very brief way, I outlined a list of problems that need an investigation, and for which we need help. This year I wish to bring to your consideration a definite list of recommended policies for our association. In some cases, the recommendations are based on data collected from the few extensive surveys of Mead and Williams. In other cases, the recommendations are partially based upon my own experience and study of the problems involved. In every case, they are presented as tentative policies and standards which will probably need to be changed from year to year, as we find we can make progress to better things.

The Supreme Importance of the Work We Represent.—First, we believe that the work of supervised student-teaching, observation of skilled teaching, demonstration teaching, and experimentation are the most important parts of the professional preparation of our prospective teachers, supervisors, and school administrators. These types of activity unite theory and practice, prepare and initiate the novice into the work, and save our children from countless blunders of well-intentioned but unprepared teachers, supervisors, and administrators.

Second, we believe that *all teachers* and persons who *supervise* teachers, and all executive administrators of our schools, should be required by law *duly enforced* to have such training. Those who supervise teachers should have additional apprentice experience in supervision, and executive superintendents should have an actual apprenticeship in such administrative work.

Laboratory Facilities.—Laboratory facilities should be provided by all institutions supplying our schools with teachers, supervisors, and superintendents, to give such training. Such facilities should consist of: (1) a school which is a constituent part of the teacher-training institution and entirely under the control of that institution; (2) a school (or schools) which belongs (or belong) to the public school system; and (3) affiliated, nearby public or private schools, to provide apprenticeship experience for prospective executive superintendents under the direction of the superintendent of said school who is jointly responsible to the teacher-preparing institution and the public-school system.

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[1] Presidential address before the National Association of Directors of Student-teaching, Chicago, Feb. 27, 1922.

The Staff of Workers Needed.—The staff of workers needed should consist of men and women especially prepared to train teachers. Mr. Williams has ascertained that 90 per cent of the institutions require that supervising teachers have the quantity of preparation equivalent to the bachelor's degree or less. In our judgment the minimum should be the equivalent of the Master of Arts degree as to quantity, plus successful experience as a teacher, and including special preparation analogous to that now offered to supervisors at the University of Chicago and Teachers College (Columbia). These should be the minimum qualifications of those who supervise student-teachers and do demonstration teaching. The general director of student-teaching (principal of the training school) should have had the same type of training and one year's experience in supervision. The minimal salaries under such conditions should be for supervising teachers, $3300 per year; for the director of student-teaching, $5000 per year.

Such salaries are justified (1) because of the previous preparation and experience involved, (2) because many of the teachers and directors must (at present) be secured from the staff of the public schools, and lower salaries will not attract them, and (3) because the present standards of living require salaries of that size. In all cases these *teachers* and *directors* should be selected, not only on the basis of the qualifications just stated, but chiefly because they are skillful in doing the service that is to be rendered.

These teachers and directors should have the same professorial rank as other faculty members of like training and experience, and have the same privileges of increase of salary and promotion in rank.

Some Standards for the Conduct of Student-teaching.—1. The amount of student-teaching to be done. In a survey made in 1914–15, it was found that in the colleges and universities, the median quantity of the student-teaching done was as follows:

In 30 State universities . . . . 5 semester-hours or 90 periods.
In 13 non-State universities . . 4.55 semester-hours or 90 periods.
In 31 College. . . . . 2.5 semester-hours or 4.5 periods.

The average for 74 institutions of all three types was 3.98 semester-hours, or 70 fifty-minute periods of teaching. Upon these data, the National Society of College Teacher of Education adopted as a flexible standard 2.5 to 5 semester-hours, or 45 to 90 fifty-minute periods.

Sanders reported (*Ped. Sem.* 20:48) that the amount of student teaching in normal schools varied from 30 periods to 400 periods, the most marked tendency being 100 to 150 periods. Kelly and Scott (*Ed. Admin. and Super.* 1:596) show that in 68 normal schools, 126 to 175 hours of teaching was the central tendency.

It is our judgment, that more intensive supervision should be provided than is possible when one teacher attempts to supervise at the same time 8–12 student-teachers who do 126 to 175 hours of teaching. It is therefore recommended that the standard amounts of student-teaching to be done by prospective teachers be as follows:

1. For prospective high-school teachers 2.5 to 5 semester hours, or 45 to 90 fifty-minute periods, and that this work be divided between two subjects. This amount should be increased to 8 semester hours or 150 fifty minute periods as soon as possible, and similarly apportioned between two subjects.

2. For prospective junior-high-school teachers, the same *amount* as for high school teachers, but the apportionment between two subjects to be optional.

3. For prospective elementary teachers, the same quantity when two subjects are taught and a proportional increase when more subjects are taught. It is recommended that, for the present, the quantity and quality of the supervision should be increased and the quantity of student-teaching diminished, and that increases in the quantity of student teaching be made later.

4. For the prospective teacher of special fields (music, art, manual arts, home economics, agriculture, kindergarten) in non-vocational schools, the same amount of student-teaching.

5. For prospective supervisors, the same amount of student-teaching, and one half year in "practice supervision."

6. For the prospective superintendent whose duties are largely executive the same amount of student-teaching and one year's apprenticeship.

The Student-teaching to be Done by Experienced Teachers.—It is recommended that teachers who have had teaching experience be given one of the following types of training, after a preliminary trial period of teaching under supervision:

1. If trial period reveals high-grade skill in teaching, the privilege of doing "practice supervision," or a different type of student-teaching than given to the novice.

2. That teachers who have had one or more years of experience be

granted such option, but in any case, the experience must be in the field for which they are making preparation.

The Type of Student-teaching to be Required for Prospective Teachers. For special teachers: student-teaching in their special field and only such teaching.

For elementary teachers: student-teaching in elementary schools, in first six years, and only such experience.

For junior-high-school teachers: departmental student-teaching in years 7, 8, or 9 in a real junior high school.

For high-school teachers: teaching in 7th or 8th grade, or in a high school.

The Number of Student-teachers to be Supervised by one Supervising Teacher at the same Time.—The National Society of College Teachers of Education recommended that the supervising teacher should never have more than 20 student-teachers under supervision at the same time. It can be easily demonstrated that this maximum is too high for careful, intensive supervision. The maximum suggested is six. Such a maximum would permit one supervising teacher, to supervise during a 9-months school year, from 12 to 24 prospective high-school teachers, or teachers preparing for any field of service.

The Quantity of Instruction to be Done in a Single Class by a Student-teacher.—The survey report published in the *Eighteenth Yearbook* of the National Society for the study of Education shows that the quantity of teaching done by a student-teacher in a single class varied from nothing to 100 per cent, and that the median tendency was 50 per cent. It is recommended that 50 per cent be established as the *maximum* in all student-teaching.

The Selection of Student-teachers.—To provide for recruiting the teaching profession so as to eliminate those of low quality of promise and intelligence, it is urgently recommended that all teacher-preparing institutions adopt some scheme of selecting the most promising candidates to do student-teaching. A scheme using data concerned with personal qualities, scholastic standing, physical and moral status might be devised. Those who are in the upper 85 per cent of the rankings in these qualities could be selected, and those below the upper 85 per cent could be eliminated.

Some More General Recommendations.—(1) The necessity of securing a recognized legal status for student-teaching is becoming more apparent. It is hereby recommended that this Association urge the enactment of such legislation as will (1) encourage the development of the work, and (2) assure the existence of such work under desirable standards, after it has been established. Members are referred to a suggested form of a law published in the last year's monograph of the Society of College Teachers of Education and to the material collected by Dr. H. G. Good showing the existing legal status of this type of work.

2. The necessity for continued research and experimentation is very great in the work which this Association represents. The members, who can do so, are urged to formulate definite research projects in the problems of this field, submit them to, and ask aid from the directors of the Commonwealth Fund.

3. The Association commends most heartily the newer experiments in this field of teacher-preparation that appear from time to time.

It has been my privilege to visit a number of institutions doing teacher-preparation during the last autumn. I found hope and reality, difficulty, and problems solved. A spirit of experiment and determination is evident. The output of literature is about the same as last year. It is my judgment that the times are auspicious and we may look forward to the future with renewed confidence.

AIMS IN EDUCATION FOR STUDENT TEACHERS[1]

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The purpose of the writer in this paper is to direct attention to the high importance of keeping clear, concrete Aims in Education before students while in the course of preparation for teaching. Observation of the professional attitude of students while pursuing their courses in Supervised Observation and Teaching has led many of us to hours of sober reflection. We have observed that these courses in Observation and Teaching occupy a most strategic position in the professional curriculum. They appear uniformly at or near the close of the curriculum and are requisites to certificates and diplomas. It appears, then, that we are justified in the conclusion that the students have academic preparation and stability of professional purpose when they come to enroll for the course in Observation and Teaching. We are here not particularly concerned with the academic preparation, but rather with the students' conception of the Aims and purposes of Education. So far as we know, all of these students are to be teachers and their purpose in life is to direct the education of the young and each and every course taken in their preparation should make some definite contribution to that end. Certainly the courses in Supervised Observation and Teaching are not merely designed to test all previous preparation. These courses have great responsibility of their own in stabilizing the students' notions of teaching.

There are two distinct phases to this problem and any comprehensive study of this question should consider both thoroughly. We must not be concerned alone with the quality of the students' conception of the Aims and purposes of Education. We must be equally concerned with the unity of effort to impart the fundamental Principles of Teaching on the part of the instructors of these students. Close contact with students while they are in the actual performance of teaching leads many of us to doubt whether the instructors in courses in Educational theory have presented to the students a wholesome homogeneous conception of fundamental principles or rather a mass of heterogeneous, individualistic notions. If the latter idea prevails generally and the writer believes it does, it is little wonder that too many students look upon the course in Teaching as merely practicing or training upon some theories or set of principles as ends in themselves. One cannot be trained to teach in that sense. Teaching cannot be practiced at all. Teaching must be studied. It is the business of teachers in Educational Theory courses to give proper direction to the study of the universal principles underlying those courses. Such a policy can only be carried to a successful conclusion when all of the instructors in a given school are committed to a program of mutual effort and understanding. Otherwise students will be misdirected or not directed at all.

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[1] Read before the National Association of Directors of Student-teaching, Chicago, Feb. 27, 1922.

The preparation of this paper was not begun until a few weeks ago and sufficient time was not available for gathering data to undertake a study of both of the above mentioned phases of the problem. An absorbing curiosity to get at the students' viewpoint led the writer to gather such data as the brief time would permit, bearing on that aspect of the topic. It is hoped earnestly that a comprehensive study will be made covering the point of view of the teachers of Educational subjects and, also, a much more complete study of the student view point and that this body may have the benefit of the results of such a study at some future meeting. A brief questionnaire designed to bring out the students' view of the course in Practice Teaching was prepared. It was responded to by the students now enrolled in the course, "Practice Teaching" in the three largest State Teachers Colleges in Missouri. Altogether one hundred and thirty replies were tabulated. To circumvent the patronizing student and to protect any prevalent professorial vanity, annonymous replies to the questionnaire were required. Every effort was made to avoid any leading or suggestive questions. It seems to us now that if this body should undertake any further study of this question, it should consider the advisability of using the "Checking-The-Right-and-Wrong-Statement" type of questionnaire. Throughout the form used, the terms (bad as they are) "Training School" and "Practice Teaching" are used because they are more widely employed than any others in Missouri and possibly in the country at large. The form used is as follows:

1. **What subjects are you teaching in the Training School?**
2. **Name the courses in Educational Theory you have had that in any way apply to the subject you are teaching.**
3. **In what specific way have these courses helped you in teaching the subject named in 1?**

4. In what specific way has your supervisor helped you in teaching the subject named in 1?
5. Name all the lessons in education not mentioned in 2 which you have had.
6. What are the aims of the course in Practice Teaching as you now understand them?
7. Suggest things which would make your course in Practice Teaching more profitable.
   (*a*) As to courses in theory of Education.
   (*b*) As to helps from supervisors.
   (*c*) As to Organization of Training School.
   (*d*) As to organizations of the College

Question No. 1 was asked merely in the hope that it would serve to focalize the attention. In Item No. 2, "Name the course in Education you have had which have helped you specifically in your practice teachings," the replies were rather easily tabulated in the four groups —principles of education, general method, special method, and educational psychology. In the 130 replies, principles of education was mentioned 75 times; educational psychology, 71 times; special method, 49 times; and general method, 48 times. It will be noted that item No. 3 calls for a statement of how these courses have specifically helped in practice teaching. The replies indicate a rather complete scatterment of ideas and they constitute a ringing indictment of the teachers of these professional courses on the ground that the students had not received a unified conception of fundamental aims. Tabulating these replies under captions appearing in the statements themselves, we find that 65 students of the 130 examined, or exactly 50 per cent, had received specific help in "the study of child life;" 43 had been helped with "specific methods;" 40 had received "broader views of the curriculum;" 32 other replies did not yield readily to tabulation; and 7 stated frankly that they could not state any definite help received. The significance of what might be done may be found in the fact that nearly 60 per cent of these students named educational psychology as a helpful study and 50 per cent indicated the study of child life as the specific help received. Subsequent examination of these replies confirmed the close relation suspected.

For purposes of continuity in the discussion, it is desirable to consider the replies to Item No. 5 at this point. Item No. 5 requests the names of all other courses in education not mentioned in the lists of "helpful studies." There was one interesting feature to this group of replies which might appropriately be labeled the students' discard. The students from one school threw into this discard studies of a certain type. In another school, a different group of studies were consigned to the scrap heap. There was at least a remarkable degree of agreement in a given school that a certain group of studies had been of no specific help in the practice teaching course. In the 130 papers, the various studies listed as not functioning in the teaching course were mentioned 177 times. This is the largest number of replies on any point appearing in the questionnaire, and it should be sufficient argument to cause the teachers involved at least to get together and do it quick.

The next item in the questionnaire gives opportunity to state the specific helps received from the supervisors. Without speaking for or against the worth of help mentioned as received, we must recognize from these replies the fact that the supervisors have succeeded in "putting over" certain things with marked uniformity. The topics or heads under which replies to this question have been classified were selected from the students' responses. Of the 130 students replying, 49 stated that they had received specific help in making lesson plans; 42 replied that they had received specific help from "helpful criticism;" 29 mentioned a specific method; 19 agreed that demonstration teaching had been of specific help, 18 declared that supervisors had specifically helped in discipline; and 16 felt that their supervisors had definitely helped them to see the aims in education. Nine other replies did not yield to the method of treatment. It will be recalled that Item No. 7 in the questionnaire requests the students to suggest things which they believe would make the course in practice teaching more profitable. Note *b* under that item calls for suggestions as to further helps from supervisors. It will be interesting to consider the suggestions received on this point while the helps received just mentioned above are fresh in mind. Unfortunately, a large number of students refrained from making suggestions of any kind. However, 49 suggestions were received and they are sharp and clear, 21 of the 49 stated that the supervisors could give more sympathetic co-operation; 21 others asked that supervisors be definite and specific in their criticism; 4 suggested more demonstration teaching; and 3 felt that they had had too much help. The writer has studiously tried to avoid burdening this paper with a personal interpretation of the replies received to this questionnaire, but, just at this point, the temptation is great to dwell at length upon the merit and lack of merit of certain types of supervisors suggested by the group of 49 replies just tabulated.

This brings the discussion down to Item No. 6, the heart of the questionnaire. The direct question was asked, "What are the aims of the course in practice teaching?" Again the terminology under which these replies were tabulated was taken from the students' statements. If an observation is permissible at all in this paper, let it be made here. The course in practice teaching is, theoretically at least, the crowning, final effort in the professional curriculum. If the aims in any course should be clear to the student, the aims of this course should, it appears, be unmistakably clear. The replies here tabulated show that the students have a great variety of notions about the course, but uniformity is utterly lacking in all but two conceptions of the course. Of the 130 replies tabulated, 90 agreed that the aim of the course was to give "teaching experience." Fifty-four stated that the aim of the course was to give "better technique in teaching; 24 said that the ultimate aim was the "child's education," 20 said that the aim was "child study." Nineteen agreed that the purpose of practice teaching was to study "lesson plans;" 6 admitted that they took the course to get credit, and 9 said that they could not see any reason at all for taking the course. After what has been shown in all that has gone before, it seems rather remarkable that there are so few as 15 of the number in these last two groups.

The primary purpose of this brief study by the questionnaire was to ascertain the students' conception of the aims and purposes of the course in practice teaching. But, in order that the students should feel that they had enjoyed full freedom to express themselves, opportunity was afforded for suggestions that would appear to make the course more helpful. Therefore, item 7 in the form used, calls for helpful suggestions (*a*) as to courses in theory of Education, (*b*) as to helps from supervisors, (*c*) as to organization of the Training School, and (*d*) as to organization of the college. Many of the students offered no suggestions of any kind, but enough were given to make the results stimulating if not conclusive. Twenty-nine students in the three schools urged as a pre-requisite to the course in practice teaching, courses dealing with special methods in the subjects to be taught in the training school. Some one will ask, "Are there schools that do not have such pre-requisites to the course in practice teaching?" The answer to that question is, "Yes, there are many such schools." Eighteen of these students urged better teaching equipment. Explananation for occurrence of this timely suggestion 18 times, may be found in the fact that teaching facilities in one of the schools in question here is notoriously bad. Thanks to a recent Legislature funds are now available for relief in this direction. Seventeen students urge more observation of expert teaching. The timeliness of that suggestion is also highly commendable. It is worthy of note, too, that nearly all in this group of 17 come under "suggestions as to courses in theory of education." Eleven students urged that more time be given to the course in Practice Teaching. It is opportune to say at this point that the course in the three schools studied covers a period of twelve weeks at the rate of one hour per day. Undoubtedly the suggestion that more time be given has much of merit. Seven students urge less help to the student teachers, 6 students offering suggestions as to the college itself urge a better attitude toward practice teaching and the training school. While this number is small, they may be striking at a very fundamental thing. The College itself may provide in its organization a conspicuous position in the professional curriculum for the Practice Teaching course, but the attitude toward the course often is not always such as to inspire confidence, faith, and belief in the high importance of the course.

If this very brief study of a single phase of the problem of "*keeping the aims of education* before students while in preparation for teaching" arouses a desire to go carefully into a comprehensive investigation of the whole problem then it has served its purpose fully. This study clearly indicates, from the students' viewpoint, that the teachers dealing with the professional curriculums have not a unity of purpose. In a further study these teachers themselves should have an opportunity to speak. It would be interesting to know whether the teachers of the so-called academic studies ever consider their subjects in the light of a problem in education or merely as bodies of subject matter. It would be a matter of absorbing interest to know whether the institutions display their attitudes toward the training schools and practice teaching courses by ample financial and professional support or principally through speeches and publications. If we could put across the idea that the training school exists primarily and fundamentally for the education of the children in it and not to afford a convenient trysting place for faddists and theorists; that the best education for children to have is the best education for the young and growing student-teacher to see and participate in, we should be doing much toward pointing out the serious need of keeping the aims and purposes of education clearly before students while in the course of preparation for teaching.

THE HUMAN SIDE OF RESEARCH IN SCHOOL ADMINISTRATION

W. HARDIN HUGHES

District Superintendent, Claremont, California

"Human Side" has purposely been included in the title of this discussion in order to emphasize the importance of the more or less non-materialistic phases of educational research and, incidentally, to show that this type of research is not necessarily the *in*-human procedure which some have imagined it to be. It is true, however, that only a few short decades ago the term research was applied primarily to the investigational activities of the scholarly recluse in his ambitious search for fact and fundamental principles. The research worker of that earlier time was concerned chiefly with the discovery of facts and their consistent organization. He was more interested in making a contribution to the sum total of human knowledge than in any application which his findings might have to everyday problems of human life. This type of research worker, entirely legitimate in his particular field, may still be found in the great universities of the world; but the field of research has been greatly extended until it includes every phase of human activity and is no longer restricted to the scholarly interests of the academician. Every substantial business and industrial organization of considerable importance now has its specialized efficiency experts engaged in continuous survey. Scientific management—whether in commerce or manufacture or transportation or government or *education*—universally demands practical and continuous research. In no other way can a maximum of effectiveness be secured.

In the public school, however, as well as in the other less materialistic institutions, practical research has not yet found the large place which it must ultimately fill. Only gradually has the school taken over and applied the lessons of scientific management which have been learned in the business and industrial world. School people and school patrons are too prone to tolerate and even to encourage the continuation of practices which were, perhaps, good enough in the earlier days of meager requirements and simple organization, but which are, unmistakably, haphazard and inadequate in this day of highly differentiated needs and elaborate institutional organization. Many practical school men, however, are now of the opinion that we must hasten to make a much more extensive use of those forms of research which are calculated to make school education more efficient and, at the same time, not less economical.

We have established departments of educational research but, notwithstanding the very excellent work already accomplished by these departments, there is still an almost limitless field for practical research remaining entirely untouched. Fortunately, however, we are gradually opening our eyes to the fact that in creating departments of educational research we have proceeded along the lines so frequently and so unscientifically followed in other educational developments—we have" tacked them on," so to speak, without adequate reorganization, and without establishing effectively working relationships. This criticism just offered, is directed not at the departments of educational research but at the general lack of organization within the system which seriously interferes with the effectiveness of research. In too many systems the principals and supervisors of the several schools put the services of research directors in the general class of luxuries and are somewhat timid about getting their legitimate share of service for fear, we may imagine, of seeming extravagant.

We should not criticize too severely, however, a condition that is entirely natural and one which is certainly to be expected in the earlier stages of any new departure in education. Even the "tacking-on" process in educational development is justifiable in that it makes possible the gradual introduction of improvements; whereas, if it were necessary to wait for a complete reorganization in order that every part of the system be in perfect adjustment, some most valuable introductions would be absolutely impossible. The fact that readjustments *are* necessary is, therefore, no criticism either of the administration in general or of the department of research in particular. In fact, the necessity for further adjustment is, in a sense, one of the significant evidences that real progress has been made.

What, then, is the next step in perfecting the work of a research department of education? In the first place, we should mention a better understanding on the part of principals, supervisors, and teachers as to the possibilities of cooperative research. It is no exaggeration to assert that the average teacher has never considered seriously these possibilities. She is as likely as not to think of the director of educational research as a statistician who is foolish enough to imagine that he can measure accurately, by means of a half-hour nonsensical test, any faculty or attainment or any conglomerate group of faculties and attainments of individuals and thereby predict with absolute certainty their chances for success. We must get away from the notion that departments of educational research have been established primarily for the purpose of fortune telling. Even the fact that certain es of test will intypdicate a very high degree of probability relative to future school success is not the chief reason for the installation of directorates of research.

It is true that in our educational systems there is, ordinarily, no machinery for pooling and using in any organized fashion even the results of observation relative to individual capacities, attitudes, and interests of students. While we all know that the world of social and economic affairs is eager to discover and to reward liberally such invaluable human qualities as initiative, cooperativeness, self control, tactfulness, broadmindedness, enthusiasm for work in hand, and ambition for achievement, still our school practices almost universally would seem to indicate that we have not considered these qualities and attitudes of sufficient importance even to record our general observations in the matter. No wonder that students are graduating from our high schools and colleges without ever dreaming of the inestimable value of the non-informational requirements for a successful life. Somehow, there must be established in our educational systems not only the conditions and standards which shall be more nearly like those of the world of affairs, but there must be a greater opportunity for the operation of natural incentives in the realization of these standards, and more adequate administrative methods for determining the extent to which definite standards have been met.

Of course, we can not hope to measure with an absolute degree of exactness the innumerable qualities of personality. We can, however, as a basis of comparative ratings use a list of the more or less fundamental habits, attitudes, and other characteristics of human behavior which our civilization has found especially valuable and upon which she has placed a high premium. With respect to any one of these characteristics in such a list, we can reasonably rate the individual as very inferior, medium, or very superior. In fact, we can make a somewhat finer degree of rating than this. The systematic pooling of the ratings from all teachers for any given student would give the research department the data from which to construct a cumulative personality record of great value. Such a record—corrected from semester to semester and from year to year— would eventually contain the most important information obtainable concerning the individual

7th yr.

Capacities, Attitudes	L	I	M	S	H
Initiative and resourcefulness					
Confidence in own ability					
Respect for authority					
Regularity and persistency in work					
Trustworthiness					
Quickness of thought					
Strength and control of attention					
Tendency to evaluate new ideas					
Sense of accuracy					
Enthusiasm for work in hand					
Orderliness					
Retentiveness of memory					
Generosity and broad-mindedness					
Courtesy and tactfulness					
Self-control under trying conditions					
Cooperativeness in group activities					
Capacity for group leadership					
Likeableness of personality					
Refinement in manners					
Sense of humor					
Optimistic tendencies					
Appreciation for the beautiful					
Careful use of public property					
Ambition for achievement					
Aspiration for distinction					
Intelligent use of leisure					

Special Interests	L	I	M	S	H
Social					
Executive					
Literary					
Mechanical					
Scientific					
Mathematical					
Expressive					
Artistic					
Musical					
Athletic					
Home-making					

student. If, to such a comparative rating sheet, we add the individual's intelligence quotient, his previous school standing, the results of his physical and medical examinations, his special lines of interest, and data concerning his home and community environment—we shall then have a collection of information calculated to make the at-present-much-talked-of provisions for individual differences of students a possibility and the educational guidance of youth much more than an ambitious dream. Indeed, how can we hope to provide for the individual differences of students without knowing much more scientifically than we know at present what those individual differences are?

The accompanying record form used in the Claremont, California, Junior-Senior High School represents an attempt at rating comparatively the individual capacities, habits, attitudes, and interests of students. The record sheet actually used, however, is somewhat differently arranged so as to be standard in size and form and contains in parallel columns space for years 7, 8, 9, 10, 11, and 12 respectively. In addition to the items indicated in this part of the form are the following: HEALTH AND PHYSICAL CONDITIONS relative to eye sight, hearing, speech, teeth, vitality, endurance, growth, chest development, nervous conditions; and SPECIAL DATA such as speed in silent reading, comprehension in silent reading, scholarship probability (intelligence quotient), musical talent (Seashore Tests), mechanical aptitude (Stenquist Tests), historical aptitudes (Barr's Diagnostic), modern language capacities (Wilkins), etc. All of these data is put in comparative form and indicated by check marks in the appropriate columns. The letters heading the columns are L, lowest; I, inferior; M, medium; S, superior; and H, highest. Special rating sheets[1] and instructions are used by teachers in pooling their estimates of those habits, attitudes, and interests for which standardized tests have not yet been devised.

In this permanent record form, "Scholarship probability" has been substituted for the more commonly used "Intelligence quotient." There are several reasons which justify this substitution. In the first place, the situations and the methods employed in the ordinary test of "general intelligence" are too narrowly literary-academic in nature to be fairly representative of life situations in general. If, as most of us believe, general intelligence in human behavior is normally indicated by ability for adjustment to the life situations which are more or less common to the members of civilized society; we are indeed misleading when we label as having high general intelligence only those individuals who, with pencil and paper, are able to do effectively the academic stunts of the present day intelligence test.

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[1] See "Meaningful High School Records" by the author of this article in the January, 1922, issue of the *American School Board Journal.*

Examine almost any of these tests and you will find that the type of situation prepared and the kind of reaction required are similar to the bookish tasks of the school. A person may be ever so successful in unscrambling the words of disarranged sentences, in repeating 6–2–8–3–9–7–4–1–5, in deciding whether alliteration is a form of pentameter, in indicating whether or not cerebral hemorrhages are conducive to thinking, in matching proverbs with their explanations, in locating the various parts of over-lapping geometric figures—in short, a person may do with an exceptionally high score any or all of the academic stunts of such test and still be an almost hopeless failure in the more practical and general situations of actual life.

But these criticisms are given neither for the purpose of discrediting the so-called general intelligence tests nor for ridiculing the work of the psychologists who formulated them. It may be, however, that a less dangerous name should have been given such tests and that much greater wisdom should have been exercised by some of the novices who have ignorantly given them. A test which has been found highly valuable for detecting even the scholarship capacities of students is not to be discarded prejudiciously either because its name is a misnomer or because its results have been grossly misused.

After all, in the great majority of cases, the most important single bit of information concerning an individual is his so-called intelligence quotient. If, for example, his IQ is exceptionally high the probability under normal conditions is that he will do better than mediocre work in the traditional curricula of the schools; that he will accomplish most in class sections which are made up of his own intellectual kind; that, if given an opportunity and a natural incentive, he will cover his courses more quickly, more thoroughly, and more extensively than is possible for the average student; that he is more likely than not to have come from a family possessing more than average intelligence, and from a home which enjoys more than the average of social and economic advantages; that he will have more than average opportunities for continuing his education in the institutions of higher learning; and that his chances for succeeding in the learned professions are superior to those of students in general. On the other hand, an IQ very much below average negatives all the probabilities stated above. It must be kept in mind, however, that justice and efficiency demand constant research for the exceptions as well as for the probabilities.

But the department of research has a much greater task than that of ascertaining the scholarship probabilities of the student population. Scholarship, it is true, has a very important place in the world today; but this is, by no means, an academic world. The minute division of labor in these modern times has provided opportunity for every conceivable type of human capacity. Individual differences in capacity, it seems, have been balanced by variation in the character of work to be done. The great problem of the social and economic world today is to see that these two are properly matched. Every time a person of A-capacity gets fixed in a position which requires only C-capacity, and every time a person of C-capacity becomes unhappily attached to a position which demands A-capacity and training—there is a loss both to society and to the individual. The educational institutions, therefore, must concern themselves more and more with the task of guiding every person toward the place in life where his capacity will be sufficient but not wasted and where his special training will be conducive to the maximum of social and individual efficiency. The realization of such an ideal as this is impossible without definite organization for continuous, cooperative research within the school system.

THE REORGANIZATION OF MATHEMATICS IN SECONDARY EDUCATION

The complete report of the National Committee on Mathematical Requirements is in the press and will, it is hoped, be ready for distribution in April. It is published under the title "The Reorganization of Mathematics in Secondary Education" and will constitute a volume of about 500 pages. The table of contents given below indicates its general character.

Through the generosity of the General Education Board the National Committee is in a position to distribute large numbers of this report free of charge. It is hoped that the funds available will be sufficient to place a copy of this report in every regularly maintained high school library and also to furnish every individual with a copy free of charge who is sufficiently interested to ask for it. Requests from individuals for this report are now being received. They should be sent to J. W. Young, Chairman, Hanover, New Hampshire. *Individuals interested in securing a copy of this report are urged to send in their requests as early as possible.* If the number of requests received exceeds the number the Committee is able to distribute, the earlier requests will receive the preference.

The table of contents of the report is as follows:

PART I. GENERAL PRINCIPLES AND RECOMMENDATIONS

Chapter I. A brief outline of the report.
Chapter II. Aims of mathematical instruction—general principles.
Chapter III. Mathematics for years seven, eight and nine.
Chapter IV. Mathematics for years ten, eleven and twelve.
Chapter V. College entrance requirements.
Chapter VI. Lists of propositions in plane and solid geometry.
Chapter VII. The function concept in secondary school mathematics.
Chapter VIII. Terms and symbols in elementary mathematics.

PART II. INVESTIGATIONS CONDUCTED FOR THE COMMITTEE

Chapter IX. The present status of disciplinary values in education by Vevia Blair.
Chapter X. The theory of correlation applied to school grades by A. R. Crathorne.
Chapter XI. Mathematical curricula in foreign countries by J. C. Brown.
Chapter XII. Experimental courses in mathematics by Raleigh Schorling.
Chapter XIII. Standardized tests in mathematics for secondary schools by C. B. Upton.
Chapter XIV. The training of teachers of mathematics by R. C. Archibald.
Chapter XV. Certain questionnaire investigations.
Chapter XVI. Bibliography on the teaching of mathematics by D. E. Smith and J. A. Foberg.

PROPOSED REORGANIZATION OF DISTRICT OF COLUMBIA SCHOOL SYSTEM[1]

Honorable Arthur Capper, Chairman,
Joint Congressional Committee,
Washington, D. C.

My dear Senator Capper:

As requested by your Committee on Friday, January 27, 1922, I have given further study to the problem of the system of control of the public schools of the District of Columbia, and offer the following suggestions. It should be understood that what I have to say relates exclusively to the "system" of control of the public schools, and that nothing in this statement is to be construed as a reflection upon or criticism of any individual or group of individuals.

General Statement of Principles

1. The present system of control of the public schools of the District of Columbia is inexcusably bad; it inevitably causes inefficiency and waste, and is directly responsible for failure to keep the schools abreast of current progress in other cities.

2. The system involves such attenuated lines and devious paths of administrative functioning that even the greatest effort and the highest ability on the part of those charged with responsibility cannot bring about efficient and economical management.

3. The hope of an adequate and permanent solution of the difficulty lies in conferring responsibility for the control and management of the schools upon a non-paid lay Board of Education, responsible directly to the people of the District, for the education of whose children the schools are maintained.

4. To the objections that this involves suffrage for the residents of the District in matters relating to the schools, and that the Congress has not yet found a practicable means of solving this problem to the satisfaction of those who seek the franchise for the District, it is replied:

(*a*) The importance of education as one of the three fundamental institutions of human society (the home, the church, the school) justifies the proposal to make of education an exception, if necessary, to any accepted general policy on the question of the franchise in the District.

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[1] This letter was addressed to Senator Cappen, Chairman of the Joint Congressional Committee, which is conducting an investigation of the public schools of the District of Columbia, and relates to the type of organization that Commissioner Tigert recommends for the administration of these schools.

(*b*) The American people have at sundry times, and in no uncertain manner, expressed themselves on the questions of neglect or exploitation of their children in the public schools. It would be easy to assemble evidence which should convince any legislative body that the people of America will support proposals looking toward efficient management and control and adequate financial support of the public schools.

(*c*) The children in the public schools of the District of Columbia are not in any proper sense wards of the United States, but children of the residents of the District. The theory that the parents of these children are not entitled to a controlling voice in the education of their children, subject to appropriate legislative restrictions, is believed to be untenable and inconsistent with the institutions and genius of the American people.

5. Certain principles of sound organization and administration of public education, which are regarded as fundamental by authorities on the subject, and which are being promulgated as basic principles, are specifically violated or nullified by the system of control of the public schools provided for the District of Columbia.

6. The plan of fiscal independence for Boards of Education having charge of the public schools has been established as an accepted and successful plan of administration in many of our larger cities, and appears to be growing in favor. By this plan, the Board of Education is vested with the power to initiate and levy taxes for educational purposes, subject to legislative restrictions, without review by other municipal authority (such as, City Council, Board of Estimate, etc.), and without interference by any other authority in the details of expenditure of funds.

RECOMMENDATIONS

The attached Charts, A, B, and the following recommendations are submitted for the consideration of your Committee:

The system of control recommended for the public schools of the District of Columbia should embody the following features:

1. *Fiscal Independence.*—The Board of Education should be given authority and responsibility to maintain and direct the schools, without interference from any source in the details of management, subject only to such legislative restrictions as would be analogous to the

State legislation affecting the school system of a city of similar size located in one of the States.

2. *Responsibility to the People.*—Provision should be made for submitting to the people of the District of Columbia from time to time important proposals affecting the schools, and for securing definite expression of popular approval before certain kinds of action are taken. The Board of Education should be responsible to the people of the District and not to Congress. Congress may properly require reports of action taken, policies decided upon, etc., and should provide for audit of the Board's finances.

3. *Determination by the People of the District as to How They Shall Be Taxed for the Support of Education.*—The people, through their representatives, the Board of Education, should have the right to determine the rate at which they shall tax themselves for public education, within minimum and maximum limits set by Congress.

4. *Federal Participation in the General Control and Financial Support of Public Education in the District.*—(*a*) The principle of the joint responsibility of the Federal Government, with the citizens of the District, for general control and financial support of agencies for public education in the District of Columbia is regarded as incontestable.

(*b*) In both of these essential particulars, it is believed that the analogy between this relationship and that existing in the several States affords a basis for determining a sound method of legislative and administrative procedure.

(*c*) According to prevailing practice in the States, the State Legislature assumes its share in the *general control* of education by enacting laws prescribing minimum standards which must be met, and setting up minimum conditions which must be complied with, but leaves the details of administration (such as the number and grades of teachers to be employed, salaries, buildings, equipment, etc.) to be determined by the local Boards of Education, in conformity with State Laws. Similarly, the State Legislature assumes its share in the *financial support* of the schools by providing a State Distributable Fund, or a flat sum per teacher employed, or per child of school age, or in some other way, but leaves the details of expenditures to the local Boards of Education, in conformity with certain general conditions prescribed by state law.

The State Legislature, in other words, determines in general terms what ends are to be accomplished by public education in the State, and provides a share of the financial support needed, and then leaves it to the local Boards of Education to devise ways and means to achieve the ends in view.

(*d*) The principle here involved has been established in its application to the sphere of Federal Government activities by Federal legislation and Federal appropriations to the States, free from restrictions in regard to details, for the Land-grant Colleges, for Vocational Education, for Industrial Rehabilitation, for construction of Good Roads, and for other purposes.

(*e*) It is recommended, therefore, that Congress shall pass laws setting up in general terms the objects to be gained by public education in the District of Columbia, indicating general minimum standards and conditions which should prevail, and specifying the minimum and maximum limits within which the Board of Education shall have power to levy taxes for school purposes. Congress should not exercise control over details of school management or procedure.

(*f*) It is recommended, further, that Congress shall appropriate funds directly to the support of public education in the District of Columbia. These should be lump-sum appropriations, based on an ascertained and agreed-upon proportion of the per capita cost of the schools. Congress should not specify the objects of such appropriations in detail.

5. *An Appointive, Non-salaried Board of Education, of Nine Lay Members.*—(*a*) Authorities on educational administration are not in complete agreement as to the best method of creating a Board of Education. The authorities consulted by the Bureau of Education seem to be agreed that, while election of members by popular vote may work satisfactorily under certain conditions, the plan does not work as well in cities of 200,000 population or over as some method of appointing. It is conceded that, generally speaking, the men and women who are best qualified for service on the Board, will not, in a large city, offer to serve and make an active campaign for election. In the District of Columbia, all things considered, appointment by the President, subject to confirmation by the United States Senate, seems most likely to insure a regard for the wishes of the citizens and the maintenance of a high standard of personnel in the Board.

(*b*) All authorities agree that the members of the Board of Education should not be professional educators connected with the school system, and that they should serve without compensation.

(*c*) In accordance with practice which has proved successful in many cities, it is suggested that the Board consist of nine members, and that the term of office be 3 years, three members being appointed each year. The President should be given the power of removal from office for cause.

6. *The Superintendent of Schools the Expert Adviser and Chief Executive Officer of the Board of Education.*—The chief functions of a Board of Education are deliberative, legislative, and inspectorial, not administrative. The Board should determine policies, and rely on educational experts whom it employs to carry them out. The system of control should definitely provide for recognition of the superintendent of schools as the expert adviser and chief executive officer of the Board. No member of the Board should exercise administrative functions.

I understand that this last-named principle (Par. 6), relating to the functions of the superintendent of schools, is operative in the present plan of organization of the schools of the District of Columbia. I have included it here in order to summarize what I regard as the essential factors in the situation. If I am correctly informed, however, this is the only one of these basic principles which is actually functioning in this school system.

I am attaching to this report two charts illustrating the scheme of administration as at present and as proposed, also citations from a number of authorities bearing on the questions at issue.

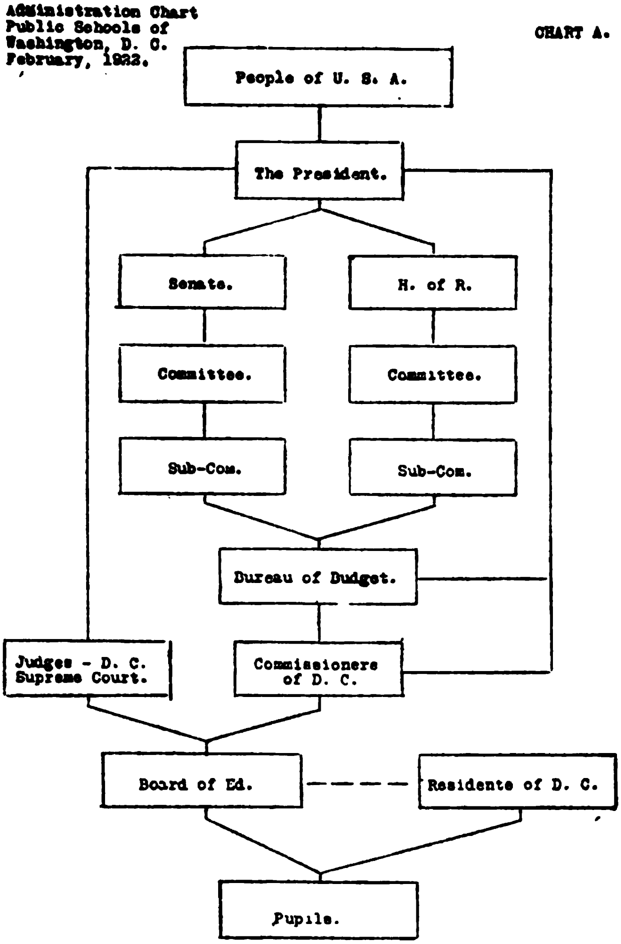
If the Bureau of Education can be of any further assistance to your Committee, I shall be most happy to serve you.

Cordially yours,
(Signed) JNO. J. TIGERT,
Commissioner.

EXPLANATION OF CHARTS

Chart A represents the main elements in the present confused and uncoördinated system of control, by which the members of the Board of Education are appointed by the Judges (who are appointed by the President, and who may or may not be residents of the District), although the Board is responsible, not to the Courts, but to the District Commissioners; the Board must lay its estimates before the District Commissioners, who in turn lay them before the Bureau of the Budget; after that, the estimates must run the gauntlet of sub-committees and committees of both Houses of Congress, sometimes of Conference Committees, and discussion on the floor of both houses, and finally go to the President for approval. At no stage of these proceedings do the residents of the District, the parents of the children, have a voice in determining what is done.

Chart B represents an outline of the proposed plan, in accordance with which the Board of Education is made responsible directly to the people, and has full authority for the financial control and educational administration of the schools; the members of the Board are appointed and may be removed by the President,



thus safeguarding the interests of the Federal Government, (that is, the people of the United States); local taxation for school purposes is placed under the control of the people; an equitable share in the financial support of the schools is represented in Federal appropriations granted by Congress, but Congress does not determine details of expenditures nor participate directly in administrative control.

LIST OF AUTHORITIES ON QUESTIONS ON EDUCATIONAL ORGANIZATION AND ADMINISTRATION

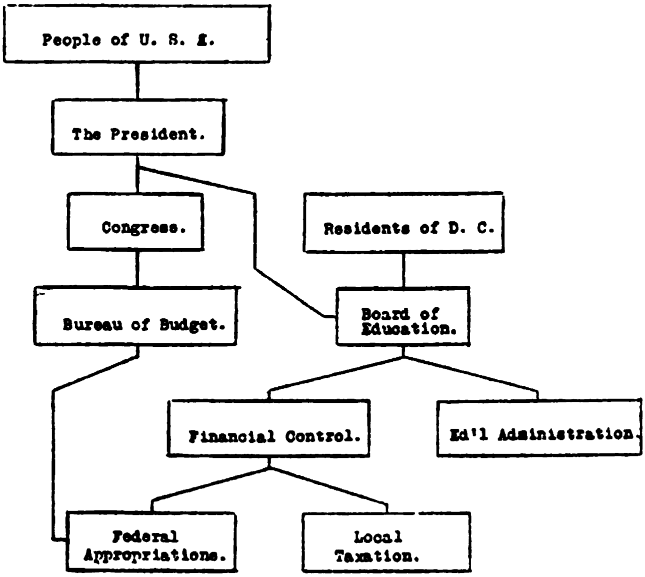
Dr. Ellwood P. Cubberley, Head of Department of Education, Leland Stanford Junior University, Stanford University, California.

Dr. Frank E. Spaulding, Dean, College of Education, Yale University, New Haven, Connecticut.

Dr. George Drayton Strayer, Professor of Educational Administration, Teachers College, Columbia University, New York City.

Suggested
Administration Chart
Public Schools of
Washington, D. C.

CHART B.



Dr. Franklin Bobbitt, Professor of Educational Administration, University of Chicago, Chicago, Illinois.

Dr. Edward C. Eliott, Chancellor, University of Montana, Helena, Montana.

Dr. Frank P. Bachman, Educational Expert, Rockefeller Foundation, 61 Broadway, New York City.

CITATIONS FROM AUTHORITIES ON EDUCATIONAL ORGANIZATION AND ADMINISTRATION

"*Cyclopedia of Education,*" Edited by Paul Monroe, Vol. II

"The confusion existing (in the public schools of the District of Columbia) is hardly credible. Authority and responsibility are hopelessly tied up with red tape. The Bureau methods in use are entirely inadequate to the task. An attempt is made to manage a large city school system by small town methods, and the result is disastrous. Educational conditions in Washington, from an administrative point of view, are among the worst to be found in any city in the Union, and the school system is behind that of cities elsewhere of equal size. The corps of superintendents is entirely inadequate, and there is no power to administer remedies or to standardize instruction and equipment. Until Congress can be made to realize that it is incompetent properly to administer such an undertaking and will give to the Board of Education the power and control which should belong to it, there is little hope of a good, modern school system for the District of Columbia. The superintendency of the schools of Washington is generally regarded as one of the most difficult and most undesirable positions in the United States" (pp. 344–345).

School Organization and Administration, by Dr. Leonard P. Ayers, Vol. II of The Cleveland, Ohio, Educational Survey

"Boards of Education exist for the purpose of getting public schools managed, not for the purpose of managing the schools themselves. Their work is to get things done rather than to do them. When they overlook this fundamental principle, confusion results (p. 15).

"It is a fundamental principle of sound administration of public affairs that policies should be formulated by boards and put in execution by individuals (p. 42).

Too much time has been absorbed by attention to details of procedure. "The result is that the sessions of the Board have become routine and detailed rather than policy making and legislative (p. 54).

"The Board of Education should devote its energies entirely to the consideration of the larger aspects of educational policy; to the careful appointment of those who are to carry out its policies; and to the making of those general regulations that will relieve the Board from the necessary consideration of details that can be otherwise disposed of (p. 65).

The reason for resistance to the inauguration of more efficient systems of administration "is to be found in the fact that people having control over power of any sort are almost always opposed to relinquishing it or delegating it to others. . . It gives us a comforting sense of devotion to duty if we are continually busy with a variety of matter. We are always able to cope with these details, and so long as all our time is consumed in dealing with them, no one blames us for refusing to consider those major matters of policy with which we are not sure that we can cope successfully. The foundation of effective management of large affairs is to organize, deputize, and supervise (pp. 67–68).

"The weaknesses which exist in the school system are not separate and specific, but are rather phases of a general condition that permeates the entire organization. This condition in part consists of and results from a lack of definite localization of authority and responsibility. (The Board is hampered by detailed and specialized prescriptions in State law and City ordinance.) Thus the members of the Board and the executive officers are always being trained in having a higher authority exercise responsibility for them . . . Superintendents, principals, supervisors, and teachers are never sure under this system that it is safe to exercise responsibility about anything . . . Responsibility is a thing which will not grow in such an atmosphere as this" (pp. 81–82).

State and County Educational Reorganization, by Ellwood P. Cubberley.

"The general powers and duties of the State Board of Education shall be:

"1. To have general oversight and control of, and strive constantly to improve, the system of public education provided by the State. Subject to and in conformity with the constitution and laws of the State, the State Board of Education shall exercise legislative functions concerning the educational system of the State, determine its educational policies, etc. . . .

"8. To adopt rules and regulations, not inconsistent with law, for the conduct of the schools of the State . . .

"12. To transmit to the General Assembly, biennially, a detailed budget, etc. . . .

"13. At the annual meeting in August of each year, to direct the State Controller as to the levy of the annual State school-tax . . .

"14. To transmit to the Governor each year . . . an annual report, etc. . . ." (pp. 20–23).

Abstract of a Survey of the Baltimore Public Schools, 1920–21, by George D. Strayer, Director; published by Board of School Commissioners, Baltimore, Md.

"It is recommended that the Board of School Commissioners be given a larger degree of control over the money made available for the public schools of the city.

"In many American cities the board of education levies taxes, and enjoys complete control of all moneys made available for the support of the public schools. The boards of education in St. Louis, Kansas City, Philadelphia, Indianapolis, Pittsburgh, Boston, Chicago, and many other cities have, within certain limits determined by law, the right to levy taxes or to submit budgets which are mandatory to the tax levying authority, and in all cases have complete control of the funds which are provided in support of the public school system . . .

"The changes in the charter advocated above and intended to provide for a larger degree of control by the Board of School Commissioners are in accord with the prevailing practice in American cities, and cannot be thought of as giving unusual power to the school authorities. If the recommendation were for complete fiscal independence of the Board of School Commissioners, it would be in complete accord with the practice of approximately half of our American cities, and would receive the cordial support of the leading authorities on educational administration" (pp. 14–15).

Educational Survey of Wheeling, W. Va.; U. S. Bureau of Education, *Bulletin* 1921, No. 28.

"To summarize the situation, perhaps rather bluntly, the fundamental weakness in the public school system in Wheeling has been executive management by laymen. There are many analogies between management of a school system by a board of education and the management of a business or a factory by a board of directors; but the fundamental principles of organization and management generally accepted in business and industry, and in progressive school systems, have not been operative in the Wheeling schools.

"The board of directors of a business or manufacturing corporation does not mix in the details of the work. It employs a chief executive, outlines its policies to him, makes clear to him the results to be secured, gives him control over the means to be employed, and then demands that he get results. They then employ various methods of accounting, auditing, and otherwise checking up the results . . .

"What is needed is the adoption of a plan by which the board will get things done in responsible ways, and enforce responsibility, without doing the things themselves.

"The board should occupy itself mainly with directorial and inspectorial functions, leaving detailed executive labors to their specialized and experienced executive officials—the superintendent of schools and his subordinates" (pp. 11–12).

Public Education in Maryland, by Abraham Flexner and Frank P. Bachman.

"A State Board of Education should be essentially a lay body, whose members are chosen because of their interest in education and their knowledge of the temper and aspirations of the people . . . representing the people, through bringing the experience of the layman and the layman's point of view to bear upon the policies proposed by their professional agents. It is, in short, the function of a State Board of Education, not to administer the schools, but to govern under the law, to legislate within its powers, and to pass judgment upon the efficiency of its paid officers . . .

"Matters relating to government and legislation belong to the board; everything having to do with the execution of the will of the board, that is, with inspection, supervision, and administration, belongs to the State superintendent" (pp. 156–158).

State and County School Administration, by E. P. Cubberley, and E. C. Eliott; Vol. II, "Source Book."

"From the point of view of the student of administration in general it appears almost self-evident that the functions of administrative boards are properly selective and supervisory. Actual administration, however, should belong to the officials selected by the board for this purpose. Such boards choose their expert servants, watch over them, mitigate the rigors of their professionalism, and stand between them and political pressure . . . a board which insures the proper selection and supervision of the expert, protecting him against the unintelligent judgment of the masses and the masses against expert narrowness of view . . . In the best-known forms of administration, provision has been made for a combination of lay and professional service . . . In the United States this system has been applied with almost uniformly excellent results to the local administration of education. Where it has gone wrong it has been because one party or other to the combination did not know its place. Boards of education sometimes try to run the schools, and superintendents or principals sometimes try to control the politics of the board . . .

"Every lover of efficient administration should unite in urging upon our lawmakers a statute and constitutional amendment embodying a proper plan for the administrative organization of education. We must prepare to surrender our differences on numerous points of detail for the sake of securing the essentials of the reform" (pp. 299–300).

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THE ASSIGNMENT OF SUPERVISED STUDENT-TEACHERS

HARL K. DOUGLASS

Professor of Secondary Education, Law, of Oregon

The fact that the large majority of men and women who have been prepared for teaching in high schools teach only a few years, averaging somewhere near 4 years, and the additional fact that the period of service after training shows no tendency to lengthen, adds considerable weight to the argument for a very definite and specific practical training in the practice of teaching. If young men and women trained for teaching positions are to engage in the profession for but a few years, the type of training of most value to them is that which yields greatest initial returns. Institutions of higher education in which high school teachers are trained, within the last decade or so, have incorporated in their pedagogical offerings provisions for actual classroom practice as a valuable portion of the training of prospective teachers. Secondary schools, by all varieties of names (demonstration schools, model schools, training schools, university high schools) controlled and supported entirely or in large part by collegiate institutions training teachers for secondary schools, have made their appearance in large numbers in this country in the last 15 years. In many other instances, arrangements have been made with public school officials where supervised student-teaching might be carried on in the public high schools within reach. The movement has grown apace.

Now, the comparative recency of this development means of course that the means of administration of student-teaching is as yet in the experimental stage. Recent studies by Mead, Stevens, Henderson, and others have thrown much light upon certain phases of present practice. Many phases have yet to be studied and others must be restudied shortly in order that recent tendencies may be brought to light. The importance of this kind of teacher-training and the recency of its development demands that a most complete survey be made of all possibilities of means and methods of administering it, that it may soon be so organized and administered as to contribute most heavily and with least waste to its avowed aims and purposes.

Whether this type of training, student-teaching, is to function as designed depends, among other things, largely upon the character of the problems and activities of the student-teachers. What we know or don't know about transference of training demands that we consider the question of how similar the training situation should be to the teaching situation as it will be later. What we know about the development of skill or habits through practice raises a number of questions such as the necessity of a good "copy" while training, the necessity of introducing new elements gradually, the necessity of preventing the occurrence or repetition of incorrect responses in the practice, and similar considerations. In other words, briefly the value of supervised student-teaching depends upon the nature and conditions of the drill or practice exercise.

The elements which go to make up the nature and conditions of the activities of the student-teacher are many and various: *e.g.*, the size and nature of her class or classes of pupils; her relationships and responsibilities in the school and to her pupils; her colleagues and her superiors, the opportunities for observation and to receive helpful supervision; the manner in which or the rate at which the various elements of the skill or skills she is to acquire are introduced into the learning situation; and perhaps first of all in sequence, the academic and theoretical professional preparation she has had for the work she is to do.

A few weeks ago I undertook to gather data which would throw light on certain of these points. I prepared a request for information and sent it to 100 institutions training high school teachers. I asked representatives of these institutions who were in charge of or in touch with the student-teaching there to write me of their plans. I asked for information on the following points:

1. By whom and on what basis are student-teachers selected for training?

2. What prerequisites, in academic subjects and in education, and what college standing (senior, graduate, etc.) are required of student-teachers?

3. How much work, *i.e.*, how many classes, are assigned to the student-teacher, and for how long? Are students ever withdrawn, and for what reasons?

4. Are graded exercises in student-teaching employed and are

student-teachers ever transferred from one class to another during their training?

5. How large are the classes used for student-teaching, and in what sort of school are they located? Are these classes selected in any way as to students or as to subject matter?

6. What constitutes the relation of the student-teacher to the department head, to the principal, to teachers' meetings and to student activities in the school in which she teaches and what is her authority in her class?

This request for information regarding present practice at their respective institutions was sent to 100 directors of student-teaching in state universities, agricultural colleges, normal schools, and teachers colleges, and in privately controlled colleges and universities. These institutions were selected so as to give a representative geographical distribution, to include a large number of the larger of better known institutions and also some of the smaller and less well known, to be evenly divided between three classes, *viz.*: (1) State universities and colleges, (2) normal schools and teachers colleges, and (3) privately controlled colleges and universities.

Seventy-three replies were received. Of this number, 16 furnished little or no pertinent data, some merely stating that they make no provision for training high school teachers. The remaining 57 replies were divided among state universities and colleges, normal schools and teachers colleges, and privately controlled colleges, as follows:

State universities and colleges	23
Normal schools and teachers colleges	12
Privately controlled colleges	22

These schools were distributed widely and rather evenly geographically. As to size, larger and better known institutions predominated.

By reason of the short time at my disposal for completing the study, this report must be restricted to certain phases of the problems upon which the data gathered would throw light, namely, the educational responsibilities of the student-teacher.

NATURE AND NUMBER OF CLASSES ASSIGNED TO STUDENT-TEACHER

Whatever may be the arguments for a short period of intensive training in actual teaching, where the student-teacher teaches several classes daily and more nearly approximates the situation of a paid teacher, it is certain that the plan is not gaining ground in practice in this country. Only two schools included in this study report such a plan—the University of Utah and Brown University. These institutions have followed this procedure for a number of years but only as one of two alternative arrangements. The University of Pittsburgh where the plan was also used as an alternative plan for a number of years now assigns but one daily class to the student-teacher. In all the other schools the student-teacher is assigned to but one class, it meeting, in almost every instance, five times a week.

The length of the period of student-teaching, however, is not so uniform—ranging from 20 lessons in the case of one state university to 1 year at four institutions. It is apparent from Table I that the semester is the usually accepted period, though in the case of the state universities the term quarter is almost as widely employed. How much this tendency to put student-teaching on the quarter basis is due to a belief that a longer period is not advisable is not certain. It is possible that the explanation lies in the fact that many colleges and universities are now organized on the term or quarter basis. As it is evident that after the first few weeks of actual teaching, the law of diminishing returns is operative and that each successive week of teaching contributes a smaller training value, it is open to serious question whether the training period should extend over more than a semester except in cases where a large part of the first semester is spent in observation or assisting. At the University of Pittsburgh where the assignment for student-teachers has been 36 weeks for a number of years, the period has been recently shortened to 18 weeks.

TABLE I.—TIME LENGTH OF STUDENT-TEACHING ASSIGNMENT

	State universities and colleges	Normal schools and teachers colleges	Privately controlled universities and colleges	All
36 weeks (year)	2.0	1.0	1.0	4.0
24 weeks (2 terms)	....	3.0	2.0	5.0
18 weeks (semester)	11.0	5.0	14.0	30.0
12 weeks (term)	7.0	2.0	1.0	10.0
9 weeks (½ sem.)	1.0	....	1.0	2.0
6 weeks (½ term)	....	....	2.0	2.0
Less than 6 weeks	1.0	....	....	1.0
Average	16.7	20.7	18.4	18.1
Median	18.0	18.0	18.0	18.0

The replies brought out the fact that barring an occasional rearrangement of the student-teachers' schedules or of the schedule of the secondary school, which necessitated a re-assignment of classes, the student-teacher taught the same class or classes throughout the period of practice teaching. Two institutions (Universities of Wyoming and Nevada) reported a policy of assigning student-teachers to two or more classes during the period of student-teaching and two others, University of Utah and Brown University, reported that this is frequently but not consistently done. It is believed that some of those replying do not touch upon this point because of the wording of the request for information. Here again is raised a debatable question; namely, whether the student-teacher profits more by teaching one class (one subject, one grade of work, one size of class, one age of pupil) or whether a better arrangement would be one whereby practice in two or more classes differing somewhat in these respects might be had. Much may be said for the latter practice.

NATURE OF CLASSES ASSIGNED

One of the mooted points in the administration of supervised student-teaching is whether classes assigned to student-teachers should be restricted as to size or otherwise selected for the purpose of student-teaching. Practice, as indicated by the replies, seems to be generally the assignment of classes as they may happen to be available in the school in which the student-teaching is done. No doubt, however, in actual practice, attempts are made to avoid giving over to student-teachers classes in which there may be unusual problems of teaching and management. Two other distinct tendencies are seen from the replies; (1) To assign small sections (as, *e.g.*, in the University of Kansas, and in Boston University); (2) to assign as nearly as possible average-sized sections (as, *e.g.*, in the Universities of Minnesota, Wyoming, Oklahoma, and Southern California). The number of institutions following the former custom is small, depending upon what may be considered the maximum of a "small" section. A slightly larger number of institutions, not greater than 10 or 15 per cent, make an attempt in this direction.

The replies threw but little further light upon the question of whether classes for student-teaching are intentionally or incidentally selected. Only 12 institutions of the 53 stated that the classes so assigned were selected in any way consciously. However, in but four

TABLE II.—SIZE OF CLASSES ASSIGNED TO STUDENT-TEACHERS

	State universities and colleges	Normal schools and teachers colleges	Privately controlled universities and colleges	All
Maximum of:				
30–34	4	2	4	10
25–29	5	3	2	10
20–24	2	5	1	8
Minimum of:				
5– 9	3	2	2	7
10–14	5	4	3	12
15–19	1	3	1	5
20–25	2	1	1	4
Miscellaneous:				
Number merely stating that size of class "varies"	3	0	7	10
Number stating classes to be "small"	0	0	2	2
Number giving definite size of class as				
15–19	2	0	0	2
20–24	1	0	1	2
25–30	1	1	2	4
Number not reporting	5	1	3	9

TABLE III

	State universities and colleges	Normal schools and teachers colleges	Privately controlled universities and colleges	All
Own school	12	8	9	29
City only	8	1	12	21
Both	3	3	1	7
After Mead '17[1]				
Own school	8	..	48	
Public school	11	..	46	

---

[1] Mead, A. R. and Others: Practice Teaching for Teachers in Secondary Schools, *Bulletin* No. 24, 1917. Bureau of Education.

cases was such selection disavowed. It is very likely that many did not understand the form of request on this point. Four of the 12 mentioned, stated that student teachers were assigned to sections in the lower classes (*i.e.* ninth and tenth grades).

A somewhat *incidental* selection is likely to occur where the student teaching is done in a school operated by the college or normal school for training or demonstration purposes. Table III shows the present practice in this particular and gives for purposes of comparison the figures on this point obtained by Mead in 1917.

The comparison suggests that provision for student-teaching in a secondary school is growing in favor among state institutions. The apparent tendency among privately controlled institutions to make more use of city schools for training purposes is only apparent. In the figures taken from Mead[1] are a large number of small colleges, maintaining academies or "sub-freshman" classes in which student-teaching is done rather than in the public secondary school for economic reasons. Of 13 large non-state universities, Mead found but two maintaining their own schools of practice. It is likely that few, if any, of these larger schools maintain academies. Five of the nine privately controlled colleges represented in the Table III as having their own schools mention that student-teaching is done in the attached academy or preparatory departments. In such schools, the classes are very likely to be somewhat unlike the classes to be taught by the student-teacher after graduation and the relation of student to teacher being outside of the class room approximately that of "fellow student" is not to be desired. The tabulation also indicates that normal schools and teachers colleges are making little use of public schools as training schools but maintain training schools of their own.

RELATIONS OF STUDENT-TEACHER TO SCHOOL

What should constitute the status and relationships of the student-teacher in the school in which the student-teaching is done? Should the teacher have direct responsibility to and contacts with the principal or only indirectly through her department head or supervising or critic teacher? Should she attend and participate in teachers' meetings? Is this a valuable part of the training? Should she have any interests in or take any responsibilities for student activities?

---

[1] Mead. A. R. and Others: Practice Teaching for Teachers in Secondary Schools, *Bulletin* No. 24, 1917. Bureau of Education.

Should her authority in the classroom be that of a regular teacher? Is it better that the student should assume full charge of her work at the beginning or should she be initiated into her duties and responsibilities gradually, *e.g.*, by graded exercise? Data on the practice in these matters are tabulated in Table IV.

TABLE IV.—STATUS OF STUDENT-TEACHER IN SECONDARY SCHOOL

	State universities and colleges	Normal schools and teachers colleges	Privately controlled universities and colleges	All
Direct relation to principal.....	5	6	17	28
Direct relation to department head or teacher.............	16	7	17	40
Attends teachers meetings.....	6	6	5	17
Assists in student activities.....	2	3	3	8
Full authority in classroom....	16	8	13	37
Gradual introduction to duties and responsibilities: Yes....	6	3	4	13
No.....	11	5	9	25

It may be said that the student-teacher works directly under the supervision of a representative of the department of the schools in which she teaches, that as often as not she has no direct relationship with the principal of the school, that usually she does not assist in student activities and in two-thirds of the institutions she does not attend teachers' meetings. Her authority is usually that of the regular teacher.

One of the most interesting outcomes of the study was the disclosure of the relatively large number of institutions maintaining some system of gradual initiation into the duties and responsibilities of teaching. About one-third of the institutions reported some such plan. It must be said, however, that some of these plans as described indicate that the course in "practice" teaching is really directed observation or "assistant" teaching in which the student never or seldom performs the complete functions of the teacher.

Among institutions reporting interesting plans were the State Universities of Minnesota, South Dakota, and Wisconsin, the Northern Normal and Industrial School of South Dakota, the University of Chicago, and Brown University. Carefully graded steps have been worked out by the two South Dakota schools mentioned.

An adequate conception of the various plans in operation can be obtained only by examining each plan in detail. The meeting is quite fortunate in having Mr. Pryor of the Northern Normal and Industrial School of South Dakota speak on the plan used at that school.

Without resorting to tabulation it may be said that roughly there are three types of such plans.

1. The participation plan, used at Wisconsin, by which the student-teacher becomes a student in the training class. Her activities consist largely of observation and reviews of subject matter with the class. A certain amount of assisting the regular instructor is done and some teaching occasionally. A similar plan is one of the alternative plans used at Brown.

2. The graded exercise plan, used at a larger number of schools, including the two South Dakota schools. Student-teachers begin by observing the simple classroom mechanics then by assuming responsibility for them in succession, and by accumulative progress gradually coming to assume full responsibility as classroom teachers. Usually the successive increments of responsibility are carefully and definitely worked out.

3. At a larger number of institutions, including the Universities of Minnesota, Chicago, and others, the preparation for assuming the full teaching responsibility is somewhat shorter and the problem of the situation is attacked more nearly as a whole, though not entirely without preliminary orientation, as the student-teacher must demonstrate the ability to teach and manage the class in short teaching periods before the more complete responsibility is delegated to her. The period of gradual introduction varies among institutions and among individual student-teachers within the institution. Usually the teacher assumes control for consecutive full periods after from 3 to 6 weeks of apprenticeship.

At Missouri, Oregon, and a number of other institutions the observation is done largely in connection with a university course of instruction and the student-teacher assumes control of the assigned class after a short preliminary period of observation. As shown in Table IV, the majority of institutions follow either this plan or else that by which the student-teacher assumes full responsibility for her class at the very beginning.

An interesting by-product of the investigation was the information from a number of the institutions regarding parallel observation work.

As this point was not mentioned in the request for information no figures for comparison can be given. This is a point worthy of investigation. Is it not possible that a plan whereby graded and directed observation and assisting should be done in one class and "full responsibility" supervised teaching done in another, the former to precede in part or to parallel the latter, would secure many of the advantages of both plans now in use and eliminate certain of the objections to both? For example, it is objected: (1) That the graded exercise or participation plan operates to lessen the confidence of the student-teacher and her control of her class for psychological reasons. (2) That the complete responsibility plan is not desirable because the teacher, having no model to follow, learns largely by trial and error at the expense of the class and with little chance for consciously directed improvement.

The questions of graded introduction to full teaching responsibility and of assigning student-teachers to more than one class and one type of work during the period of student-teaching constitute very interesting points and invite experimentation and investigation.

By way of summary, this study seems to indicate that in colleges, universities, and normal schools in the United States making provisions for student-teaching for prospective high school teachers.

1. The student-teacher is assigned to one high school class daily for a term or a semester, though occasionally for a shorter or longer period.
2. This class varies as to size as do high school classes naturally, though it is more often smaller than larger than average.
3. This class is ordinarily not selected except that it is as likely as not to be a class in a high school operated by the collegiate institution.
4. The student-teacher is ordinarily not considered a regular member of the faculty as regards teachers' meetings and student activities.
5. The student-teacher tends to have her responsibility centered in her supervisor rather than in the principal of the school, though as often as not she has direct relationship with him.
6. There is wide variation in different educational institutions in the relationship of the student-teacher to the class work. It varies from that of little more than an observer to that of complete teaching responsibility.

ADMINISTRATION OF OBSERVATION IN THE TEACHER-TRAINING INSTITUTIONS OF THE UNITED STATES

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A study was recently made of "Demonstration Teaching and Observation in the Teacher-training Institutions of the United States," the results being tabulated under two divisions:

I. Administration of Demonstration School or Classes.
II. Administration of Student-teachers' Observation.

The first relates to the general features of management; the control of the school; the type of school used; the selection, employment, preparation and salaries of demonstration teachers; the supervision and coordination of the work of the demonstration teachers; and the facilities in schools for doing observation. The second relates to the more specific problem of supervision of the student's observation. It is to the second of these problems that this paper is devoted.

The accompanying tables are the results obtained in tabulating a questionnaire which was sent to 750 normal schools, colleges and universities. Replies were received from 10 state agricultural and mechanical colleges, 29 state universities, 20 non-state universities, 136 colleges, 85 normal schools, and 15 city normal schools. Of the colleges, 20 had an enrollment of over 1000 students, 22 of more than 500, and 94 less than 500. Each of the 295 institutions replying offers some courses in education, but many have no work in observation offered or required. Of the institutions having no observation more than three-fourths are in the colleges—usually the smaller ones.

For ease of reference and tabulation the tables are arranged to indicate the situation in the following groups:

I. State Agricultural and Mechanical Colleges and Technical Schools (10 have observation).
II. State Universities (23 have observation).
III. Non-state Universities (11 have observation.)
IV. Colleges (90 have observation).
V. State Normal Schools (85 have observation).
VI. City Normal Schools (15 have observation).

In all the groups a total of 234 report observation as being done. This is distributed as indicated in parentheses in the table above.

TABLE I.—(*a*) YEAR OF NORMAL SCHOOL OR COLLEGE COURSE IN WHICH OBSERVATION WORK IS GIVEN

1. For Senior High School Teachers

Type of institution	I	II	III	IV	I–II	II–IV	III–IV	IV–graduate	Graduate
Group I..........	0	1	1	3	0	0	0	0	0
Group II..........	0	0	3	3	0	0	6	1	1
Group III..........	0	0	1	4	0	0	1	1	0
Group IV..........	0	4	3	24	0	2	18	2	2
Group V..........	7	6	2	5	1	0	4	0	0
Group VI..........		None reporting train high school teachers							
Totals..........	7	10	10	55	1	2	32	4	3

2. For Junior High School Teachers

Type of institution	I	II	III	IV	I–II	II–IV	III–IV	IV–graduate	Graduate
Group I..........	0	0	0	0	0	0	0	0	0
Group II..........	0	0	1	2	0	0	2	0	0
Group III..........	0	0	0	0	1	0	2	0	0
Group IV..........	2	2	3	14	0	0	9	0	0
Group V..........	13	17	0	0	10	1	5	0	0
Group VI..........	0	0	0	1	0	0	0	0	0
Totals..........	15	19	4	17	11	1	18	0	0

3. For Elementary Teachers

Type of institution	I	II	III	IV	I–II	II–IV	III–IV	IV–graduate	Graduate
Group I..........	0	0	0	0	0	0	0	0	0
Group II..........	1	2	0	0	1	0	1	0	0
Group III..........	0	0	0	1	6	0	2	1	0
Group IV..........	9	9	1	7	3	0	4	0	0
Group V..........	27	25	0	0	17	0	0	0	0
Group VI..........	2	2	0	0	3	0	0	0	0
Totals..........	39	38	1	8	30	0	7	1	1

Since the practical work is becoming more and more the core of teacher-training courses, the technique of supervision is especially important. Especially for those in the earlier stages in establishing courses in teacher-training in their institutions, it is desirable to have information regarding current practices in similar institutions. Among so large a number of institutions there is necessarily much divergence in practice. If the divisions of this study seem rather detailed and minute, it is because it has been thought that such a treatment would best reveal the facts, and does not indicate a desire for formal treatment in conducting observation and demonstrations. Whether formal or informal, the direction of observation must be *definite*. Returns from the questionnaire indicate considerable haziness in many stances. The order of discussion is that of the original investigation.

The table reveals that for teachers in senior high schools, few schools of any type have any work in observation below the third year of the course. When given below the third year, it is usually in the normal schools, and not in colleges and universities. In two-thirds of the cases observation is done only in the senior year, or is begun in the junior year and continues into the senior year. In contrast with this situation, the observation for those preparing to teach in the elementary is in more than four-fifths of the schools reporting done in the first 2 years of the course. There is less agreement where teachers are trained for junior high schools. In general the normal schools give observation work for this group in the first 2 years, the colleges and universities in the last 2 years. Of the 45 normal schools reporting, 40 place the observation in the first 2 years, whereas 33 of the 38 colleges and universities locate it in the last 2 years of a 4-year course.

TABLE II.—(*b*) OBSERVATION SEPARATE OR COMBINED WITH OTHER COURSES

Type of institution	Separate course	Combined with other courses	Total reporting
Group I	0	10	10
Group II	5	17	22
Group III	2	8	10
Group IV	32	51	83
Group V	35	48	83
Group VI	3	9	12
Totals	77	143	220

Three types of situations are found: Those having separate courses those having all observation combined with other courses, and those having a separate course and also having a combination with other courses. Practically two-thirds of the 220 institutions reporting have observation combined with other courses, and the tendency seems to be in the direction of such combination. This agrees with a rather definite tendency to make the work somewhat less formal in character.

TABLE III.—(*c*) COURSES WITH WHICH OBSERVATION IS COMBINED

Type of institution	Practice teaching	General methods	Special methods	Methods and management	Educational psychology	Principles of teaching
Group I.......	6	3	8	1	1	1
Group II......	14	8	7	2	0	2
Group III.....	3	3	4	4	2	1
Group IV.....	22	33	21	21	10	12
Group V......	44	27	34	17	10	16
Group VI.....	7	6	7	7	7	6
Totals......	96	80	81	52	30	38

TABLE IV.—(*d*) NUMBER OF COURSES WITH WHICH COMBINED

Type of institution	Number of courses with which combined					
	I	II	III	IV	V	VI
Group I..........................	4	3	2	1	0	0
Group II.........................	7	5	4	0	1	0
Group III........................	3	2	0	1	5	0
Group IV.........................	25	14	10	5	0	3
Group V..........................	18	11	16	7	4	2
Group VI.........................	1	1	2	2	1	3
Totals...........................	58	36	34	16	11	8

It will be noted that the order of frequency of combination with other courses is, in order, practice teaching, special methods, general methods, methods and management, principles of teaching and educational psychology. Five of the normal schools and three colleges make provision for observation in a course given in the first year of training called "Introduction to Teaching." The usual combination is with the practical courses connected with method.

When observation is combined with one course, it is most often combined with practice teaching; when combined with two, with practice teaching and methods; when with three, with practice teaching, general methods, and special methods; when with four with practice teaching, general methods, special methods, and school management. It is least often combined with educational psychology.

TABLE V.—(*e*) SEMESTER HOURS CREDIT GIVEN FOR OBSERVATION

Type of institution	Senior high school			Junior high school			Elementary school		
	Average	Median	Range	Average	Median	Range	Average	Median	Range
Group I	None have separate course in observation								
Group II	2.8	2.0	1–8	1.7	1.6	1.5–2			
Group III	1.1	1.2	1–1.5						
Group IV	2.6	2.0	0–12	2.5	2.0	0–10	3.0	3.0	0–10
Group V	6.0	5.0	2.5–12	4.3	4.5	0.7–12	5.2	4.5	0.7–15
Group VI	...	...	......	...	...	......	4.8	4.8	8–12

The striking variation is evident in this table. The amount of observation deemed necessary ranges from none to 15 semester hours credit. A similar wide variation exists for teachers preparing to teach in the same type of school. Thus for junior high schools the average amount of observation is 1.7 semester hours in the agricultural colleges, 2.5 semester hours in the colleges, and 4.8 semester hours in the state normal schools. In general the amount of credit in normal schools is twice that in the college. Closer agreement might be secured.

The most common prerequisites in order of the number of institutions requiring them are: Educational psychology, special methods, general psychology, principles of education, school management and history of education. General psychology is more frequently required in colleges and universities than in normal schools. Many schools have no prerequisites for observation, but have an intro-

TABLE VI.—(*f*) COURSES IN EDUCATION PREREQUISITE TO OBSERVATION

1. For Senior High School Teachers

Type of institution	Educational psychology	Special methods	Principles of teaching	School management	Secondary education	Philosophy of education	Experimental psychology	History of education	General pyschology
Group I	8	11	6	3	2	1	2	6	8
Group II	5	4	2	2	0	1	0	3	6
Group III	9	7	8	2	0	0	1	3	3
Group IV	37	36	26	29	9	12	7	34	43
Group V	19	17	13	9	2	2	1	6	3
Group VI	0	1	1	0	0	0	0	0	1
Totals	78	76	56	45	13	16	11	52	71

2. For Junior High School Teachers

Type of institution	Educational psychology	Special methods	Principles of teaching	School management	Secondary education	Philosophy of education	Experimental psychology	History of education	General psychology
Group I	2	2	2	1	0	0	0	1	2
Group II	3	6	2	1	1	0	0	4	5
Group III	1	0	1	1	0	0	0	0	1
Group IV	20	17	9	5	7	5	3	15	23
Group V	29	27	26	15	3	1	1	8	12
Group VI	No data for this group								
Totals	55	52	42	23	11	6	4	28	43

3. For Elementary Teachers

Type of institution	Educational psychology	Special methods	Principles of education	School management	Secondary education	Philosophy of education	Explanatory psychology	History of education	General psychology
Group I	1	1	1	1	0	0	0	2	4
Group II	3	3	1	1	0	0	0	2	4
Group III	0	0	0	0	0	0	0	0	1
Group IV	17	16	17	19	6	7	6	17	22
Group V	45	37	37	22	7	3	4	10	17
Group VI	2	2	2	2	1	1	1	2	2
Totals	68	59	58	39	14	11	11	33	50

ductory course in which observation is introduced for the purpose of setting the teaching problem for the student. It is a debatable question which method is the most effective. Many still believe in prerequisite courses.

TABLE VII.—(*g*) MINIMUM NUMBER OF CLASS VISITS REQUIRED

Type of institution	Senior high shcool		Junior high school		Elementary school	
	Average	Median	Average	Median	Average	Median
Group I	11.7	11	4.0	4		
Group II	32.1	30	22.8	18	19.3	18
Group III	26.2	23	12.0	12	12.0	12
Group IV	21.9	20	23.6	24	26.4	32
Group V	37.2	38	26.5	33	51.6	36
Group VI	....	..	....	..	46.6	40

The range for senior high school teachers is 10–60 visits; for non-state universities 12–50; for colleges 6–40; for state universities 10–30; in city normals 3–100; in state normals schools 8–300. The range is exceptionally large even within the same class of institution.

TABLE VIII.—(*h*) DISTRIBUTION OF OBSERVATIONS

Type of institution	All previous to teaching	All parallel to teaching	Both previous and parallel
Group I	2	0	8
Group II	0	0	8
Group III	5	0	0
Group IV	14	7	22
Group V	8	1	26
Group VI	4	0	6
Totals	33	8	68

The table indicates that the most frequent case is where a part of the observation is required before teaching, and is continued during practice-teaching. A large group, especially in the colleges, require all observation before practice-teaching is begun. Some specify a division among matters of general organization, general principles of teaching, management, etc. However, the greater number do not formally divide the time. Experience has indicated that the most helpful situation is that in which the observation is begun before the teaching and is continued during practice.

Table VII shows the number of visits to the classroom required. While important to know how often visits are made, it is also necessary to know the total amount of observation as expressed in clock-hours. Table IX shows a summary of the total amount of time spent in observation.

TABLE IX.—(*i*) CLOCK-HOURS OF OBSERVATION REQUIRED

Type of institution	Teachers			Teachers			Teachers		
	Senior high school			Junior high school			Elementary school		
	Average	Median	Range	Average	Median	Range	Average	Median	Range
Group I	5.5	7.3	3–20						
Group II	26.4	19.0	5–75	15.3	12.0	10–18	20.0	20.0	10–30
Group III	21.6	18.0	12–50	22.5	22.5	5–35			
Group IV	29.6	26.0	3–180	34.9	26.0	3–180	31.2	31.1	6–90
Group V	82.6	60.0	15–215	77.9	48.0	10–600	72.0	48.0	10–600
Group VI	....	....	......	....	....	......	60.0	72.0	20–160

Normal schools, city and state, stress observation more than other types of institutions. They require from two to three times as many hours.

The wide range in the number of hours is striking. There seems to be little general agreement and no common standard regarding the time necessary. Some institutions require 50 to 60 times as much as others. The average length of the single observation ranges from 49 minutes to 165 minutes for senior high school teachers in the six groups; from 34 minutes to 181 for junior high school teachers; from 40 to 89 minutes for elementary teachers.

School Grades in Which Observation is Required.—The common situation is that prospective teachers for the senior high school are required to observe in grades nine to twelve; junior high school, from six to nine, though often from nine to twelve. Among colleges it is common for prospective junior high school teachers to observe classes in senior high schools only. This seems a mistake, as the aims and methods of the junior high school are different. For the elementary teachers classes in grades one to six are visited. Where a junior high school is not maintained the eight grades are used. A few normal schools require all prospective elementary teachers to visit the kindergarten also. A few institutions require the primary teachers to observe in the kindergarten and the first three grades, the grammar grade teachers in grades four to six, inclusive. Several schools require observation in all grades from the kindergarten through the high school for both elementary and high school teachers.

There seems to be general agreement that the teacher should observe grades other than those in which she will teach. It would seem advantageous to observe some of the work below that a teacher may have some realization of the work done before pupils come to her, and to observe the grades above that she may know for which things pupils must be prepared.

TABLE X.—(*j*) TRAINING INSTITUTION HAS OUTLINE FOR DEMONSTRATION TEACHER TO USE

Type of institution	General for all subjects	Different for each subject	Different for each type of recitation
Group I	2	3	2
Group II	4	5	2
Group III	4	0	0
Group IV	16	5	9
Group V	23	13	16
Group VI	1	2	3
Totals	50	28	32

TABLE XI.—(*k*) STUDENT-TEACHER HAS OUTLINE TO USE

Type of institution	General for all subjects	Different for each subject	Different for types of recitation
Group I	2	2	0
Group II	7	5	3
Group III	0	1	1
Group IV	26	10	8
Group V	28	19	22
Group VI	1	1	3
Totals	64	38	37

Table X shows data from a total of 110 schools which reported (37.3 per cent). These have some type of outline for the demonstration teacher. Thirty four institutions report no outline of this character. Of the 90 other institutions having observation, it may be safely assumed that most have no outline.

Of all the schools which have observation 39report on this item; 95 do not report. Many of the better organized schools have a general outline for the students, and in addition an outline different for each subject. The tendency is to study recitations as such without emphasis upon "types."

Conferences with Students on Observations.—The usual method is to hold group conferences at stated periods. These are held daily, three times weekly, weekly, or at longer intervals. Eighty-five per cent of all schools reporting have a definite schedule of conferences with the entire group. The most frequent arrangement is the weekly conference. Several have daily conference with the critic teacher, and weekly conferences with the Director of Training or the Professor of Education. The number of conferences held varies greatly, having a range among colleges of 2–36; among the normal schools of 10–60; in state universities 5–36. About one-third of all schools do not report a definite schedule of conferences. Individual conferences are generally given in all types of schools as needed, having no definite schedule.

Such comments as the following seem to indicate a lack of thorough organization: "No students go though the same routine," "depends on teacher," "too few," "elastic," "as needed," "irregular," "not standardized." While definite work may be done without a definite schedule, such a procedure is in danger of resulting in loose supervision of observation.

Both oral and written reports are required in discussions of classes observed. This seems to be the general rule. A few require a written report at all times, and a comparatively small group oral reports only.

In some instances conferences are held only before demonstrations; in others only afterward to discuss the observations; in some both are required, the former to prepare the student to observe intelligently, the latter to discuss the results.

It would seem best to have conferences with both a forward and a backward look. Without preparation students are in danger of missing vital points; the discussion at the close makes them responsible for minute observation.

TABLE XII.—(*l*) INSTRUCTOR CONDUCTING CONFERENCES WITH STUDENTS

Type of institution	Number of institutions						
	Demonstration teacher	Critic teacher	Instructor in general method	Instructor in special method	Director of training	Professor of education	Instructor in academic subject
Group I	2	5	5	1	0	3	2
Group II	7	3	14	9	0	2	0
Group III	3	1	4	0	2	0	0
Group IV	10	10	38	13	0	5	7
Group V	34	34	27	33	10	0	0
Group VI	6	5	5	6	0	0	2
Total	62	58	93	62	12	10	11

In the great number of cases the observation is conducted under the immediate supervision of the critics, demonstration teachers, and instructors in method, general and special. Three institutions have the superintendent of schools in direct charge, two of these being state normal schools. In answer to the question whether the demonstration teacher is present at the conferences when he does not conduct them, 21 state normals reply affirmatively, and 17 in the negative, 11 stating that he is present sometimes, and one "if he wishes." Only one college states that the demonstration teacher is present. Seventeen colleges reply that he is not present. In other types of institutions, he is usually not present.

Rating of Lessons of Student-teachers.—Only seven of all normal schools reporting have students definitely rate lessons which they observe. The usual treatment is discussion and analysis with no attempt at definite rating.

Few institutions have score cards or rating schemes to determine the standing of students in the course. Typical comments are "not rated," "written reports of visits," "judged in connection with practice-teaching," "by tests," "as other work," "only in a general way," etc. For demonstration teachers to definitely rate the members observing is almost as rare as for the student to rate the teacher.

CONCLUSION

The following conclusions and recommendations are submitted!

1. The replies indicate a growing tendency towards an informal or

"normal" type of observation as distinguished from specially staged work. Daily "run of the mine" work is being observed.

2. Separate courses in observation are being abandoned for courses combined with other subjects, such as practice-teaching and methods. This is a wholesome tendency, if this informal type of procedure does not cause work to be loosely conducted.

3. There is need for schools and classes for observation under conditions more closely approaching the normal public school situation; to determine the amount of observation which is necessary in the preparation of a teacher; to determine how much credit should be given.

4. Reports show that observation often lacks "definiteness." There is need for the student to be definitely prepared for observation by means of previous discussion and suggestion; for carefully planned observation guides and outlines to direct the actual observation; and for a more definite and rigorous checking of what was actually seen in the classroom.

5. Vital conferences are necessary, if possible with the demonstration teacher present. Reports should be written if oral reports lack definiteness. These reports should analyze the teaching process, and compel specific study of the lesson, rather than mere "class visitation."

6. Lessons should be definitely rated as this compels an analysis of the lesson.

FIELD WORK AS A MEANS OF TRAINING STUDENT-TEACHERS

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It is a common practice of professional schools to require a period of field or clinic work in addition to the academic courses before the student is adjudged to have completed his training. This field work comes at various times during the course, usually at the end. Classes of students who are about to be graduated from engineering schools usually arrange a trip to various places which give them first hand information regarding the practical phases of their work. Medical students spend a year or more in clinics after 4 years in the medical college. Aside from the half dozen or so experiments with graded participation, such as Pryor or Aberdeen, South Dakota, Stuart of Swarthmore, Bradfield of Lagrange, Georgia, and others have worked out, rarely is there any extensive use made of this device earlier in the course. Just why this is so is not clear. It is obvious that if the student could continually apply his classroom work in a practical way through field work the regular collegiate studies would be more valuable. Interesting variations of this type of training occur. In the University of Cincinnati Engineering school, students are on a half-time basis, and spend one-half of their time at work in shops and plants and during the other half are at work in the college itself.

Very little use is made of field work of a practical nature in teacher-training. Usually whatever work is done consists of visits to schools and observations of teaching. There is little opportunity for active participation in the actual work of the teacher. The reason for this is that the necessary facilities are lacking. Private normal schools, state normal schools, colleges of education and other teacher-training institutions are usually a unit by themselves and have only limited opportunities for field work, especially if they are located in small cities.

Detroit Teachers College is particularly fortunate in that it is an integral part of a large city school system and has available for its work the vast resources of this great laboratory. It is possible to provide courses to help the teachers who are actually engaged in work in the city and also to provide the training needed for student-teachers who are to be placed in the schools.

A thorough understanding of the problems of the teacher in the grades makes it possible for a student to make an adjustment to them much more easily than is the case where the new teacher has no knowledge whatever of the particular duties devolving on the teacher in a large city. In planning a course of study for a city teacher-training institution, it is possible to organize it about the needs of the teachers in the city and the policies adopted by the administrative officers of the schools. Such a course has vitality and life as long as the students can see its relation to the work of the teacher.

In order to make this relationship clear, it is necessary that the student have first hand experience in the field, not only at the end of the course, but during the whole length of time when he is pursuing his studies. For this purpose, Detroit Teachers College has organized a large amount of field work in the shape of trips, visits, substitute service, observations, and so on as a part of the regular work during the year.

In addition to this, there has developed during the past year a valuable type of field work, namely the assignment of students to the various schools in the city during the 3 weeks immediately preceding the beginning of the fall term in the college proper.

In the spring of 1921 there were so many calls for assistance at the end of the term that students were assigned to schools as far as was possible. These students were to be used by the principals in any way they wished to use them, provided that the experience was an educative one. This practice met with such general approval that requests were made for similar help in the fall. With the approval of the district principals, plans were laid for the assignment of students to schools in the city in September. The possibilities offered by this work were discussed with both principals and students. As conditions vary so widely from school to school, no definite program of work to be done was arranged. Principals were advised that they might make any use of these students that they might deem necessary and desirable. Only those students were used for this work who had had at least one semester's work in the Teachers College. The result was that in the fall before the regular work began, all students who had been in attendance during the previous year were given an excellent opportunity to study at close range the work of the city and to bring to their classes in the college a large amount of information of a varied type and a wealth of practical experience. The information so gathered has continually cropped out in the various classes and has vitalized the work done in the college.

To determine the efficiency of the work done by the students under these conditions the principals were asked to rate the attitude of the students and the character of work done and to list the types of duties the students engaged in. They were also asked to express their opinion of the value of this type of assignment and to make suggestions for its improvement. The students were asked to rate their attitude toward the work, the school's attitude toward them, to list the difficulties upon which they needed help and the various assignments that they took part in.

Table I shows the ratings given students by the principals on the quality of work done and their attitude towards it.

TABLE I.—RELATION BETWEEN ATTITUDE AND QUALITY OF WORK
Ratings of 236 Students by 104 Principals

Attitude	Quality of work								
	A	B+	B	B−	C	C−	D	Total per cent	Number of students
Excellent or A	20	10.0	22	3	1	...	...	56.0	134
Good or B	2	2.5	24	5	2	0.5	0.5	36.5	85
Fair or C	..	....	1	..	4	1.0	...	6.0	14
Poor or C−	..	....	..	..	1	...	0.5	1.5	3
Total, per cent	22	12.5	47	8	8	1.5	1.0	100.0	
Number of students	52	30.0	12	19	18	3	2	.....	236

The table reads: 20 per cent of the students were marked "A" in quality of work done and excellent in attitude. The rest of the table may be read in the same way. The table also gives the actual number of students under each classification.

One striking fact about this table is the evidence that principals considered the attitude of the students excellent in 56 per cent of the cases and good in 36.5 per cent of the cases, or a combined total of 92.5 per cent rated excellent or good.

Another striking fact is that 81.5 per cent of the students were rated average or above in the quality of the work done. Twenty-two per cent were rated excellent, 12.5 per cent very good, 47 per cent average.

Table II shows the students' rating of their own attitude toward the work and the rating they give the school's attitude toward them.

TABLE II.—STUDENT'S OWN RATING

	Good	Fair	Poor	Not stated	Total
Her attitude toward the field work	215	6	0	3	224
School's attitude toward her......	215	5	0	4	224

It can be seen that the ratings given their own attitude by the students agree with those of the principals, namely, that their attitude was in the great majority of cases good. The comments made by the students themselves show that they greatly appreciated the opportunity offered by this work. Their opinion regarding the attitude of the schools is shown by the lower half of the table. In no case was the school's attitude toward them rated as poor. The excellent treatment received in all of the schools has been a matter repeatedly commented on by the students.

The principals of the schools made many valuable suggestions regarding this new type of work. An analysis of their comments, presented in condensed tabular form is given in Table III.

TABLE III.—PRINCIPALS' IMPRESSIONS OF FIELD WORK BASED ON REPLIES FROM 104 PRINCIPALS

Type of statement	Yes	No
1. Work beneficial to school......................	92	1
2. Work beneficial to students....................	75	0
3. Approve experiment...........................	43	0
4. Suggested improvements.......................	16	0
5. Work caused trouble or inconvenience...........	3	0

All principals did not make comments which might be classified under all of these heads. Only such statements were tabulated as could be definitely classified under each heading. Ninety-two principals out of the 104 who replied said that they felt that the work was distinctly beneficial and helpful to the school and 75 said specifically that they felt it was also distinctly helpful to the students. Only one said that the work was not beneficial. Thirty-six stated in addition to the general favorable comments mentioned that they approved of the experiment and recommended that it be continued. Sixteen made definite suggestions for improvement, largely connected with organization and information as to what was wanted. Three said that it caused some trouble and inconvenience. The principals as a whole apparently considered the work done as valuable and helpful to all concerned. This feeling appeared in almost all of the comments that appeared on the replies.

The work done by the students during their period of field work may be classified as teaching, clerical, and miscellaneous.

Table IV gives an analysis of the teaching assignments given the students during this period.

TABLE IV.—TEACHING EXPERIENCE GAINED BY 236 STUDENTS

Teaching in kindergarden—3 grades	328
Teaching in 4–6 grades	67
Teaching in 7–8 grades	22
Departmental work	31
Special activities	93
Total	541

Students taught in all grades and did departmental teaching in a wide variety of subjects. It is to be noted that it was done largely in the lower grades, to which students are generally assigned upon graduation. This was generally done in the absence of the room teacher, so that the students gained valuable experience in handling groups of pupils.

Table V gives an analysis of the variety of clerical and miscellaneous tasks the students performed.

TABLE V.—CLERICAL AND MISCELLANEOUS WORK

1. Care of children Library Rooms Office Materials Halls	306	3. Preparation of charts Copying programs Enrolling students Classroom clerical work Filing Mimeographing Typing	296
2. Errands Visiting homes Measuring children	153	4. Giving and correcting tests	67

5. Making out forms and reports
(A very large number of all types)

In the totals are included a large number of activities which could be conveniently classified under each. Space does not permit a detailed statement of all of these. Suffice it to say that practically all phases of a teacher's work were entered into by the students. The value of this work is clearly seen in the variety of reactions made by the students in classes when various topics are mentioned. Concrete instances are readily available. The why of incidents can be explained in the classes in the college. The work is vital because it has been a real experience. Courses are so organized as to develop the students' experiences and to make use of them throughout. The difficulties listed by the students have offered many valuable suggestions as to what the content of courses should be. Students know the problems of the teacher and are eager to learn how to overcome them.

The reactions of both principals and students have been so satisfactory that the experiment is to be repeated this fall. Students are to be used by the principals in ways that appear to them desirable and profitable. The students have been having training at the college that should make them better able to meet the demands that will be made of them. Suggestions as to how to make any further improvement in the work are welcomed. The type of service the students can render during the rush of the first 3 weeks of school can be rendered increasingly worth while if the same plan is carried out as was used in the first trial, supplemented by such information as has been presented in this report. Those who will direct the work of these students in the schools of the city can render a distinct service to the city by making it possible for the Teachers College to turn out a group of students adequately trained to meet the needs of the city of Detroit and prepared to adjust themselves quickly to the new work.

STUDENT-TEACHING AND THE TRAINING OF THE JUNIOR HIGH SCHOOL TEACHER

HERBERT H. FOSTER

The *raison d'etre* of the junior high school lies in the unique character of its task—a task generally recognized as including many activities not found in the elementary school or the traditional high school. A disposition on the part of many school officials to staff the junior high school not by drawing directly from training institutions but by retraining experienced elementary school teachers naturally raises a question as to the future and the function of student-teaching on the junior high school level. Does the situation justify a conclusion that the training of the teacher for this new type of school is not to be a pre-service but an in service training? Not a constructive but a reconstructive process? The implication of this condition forms the problem of the present paper.

With the intent that actual conditions should form the basis for conclusions, resort was had to a double questionnaire, addressed to some 75 school superintendents and about 50 universities and teachers colleges. The superintendents were of cities widely distributed over the country, and ranging in size from Cleveland, Denver, and Detroit to semi-rural communities. In practically all cases these represented junior high schools of several years' standing and including grades 7–9, the thought being that such were more representative and were based on longer established policies. The second part of the questionnaire was addressed to supervisors of student-teaching or professors of education in universities or teachers colleges which seemed most likely to be training for junior high school teaching. The replies were careful and full, and were returned by nearly all to whom addressed.

The problem of student-teaching as training for junior high school teaching falls into four divisions. The need, the demand, the supply, and the character. These will be considered in order.

(*A*) *The Need.*—There seems to be general acceptance of the proposition that student-teaching of junior high school type has two main functions: Acquaintance with the junior high school child, and acquaintance with the junior high school as an institution. The need for student-teaching must be based upon the student's need for one or both of these two things. And that depends on who is the student.

Answers to the questionnaire indicate that in 45 per cent of the cases the junior high school teachers are drawn from the ranks of experienced elementary school teachers, in 40 per cent from recent graduates of colleges and universities, and in 15 per cent from recent graduates of normal schools. However, most of the 45 per cent first mentioned require that the teachers shall have supplemented their teaching experience with enough study to give them the vantage of at least 3 and preferably 4 years of study of college rank, with special reference to the junior high school field. Moreover, more than 90 per cent of the superintendents reply that the prospective junior high school teacher should have student-teaching as a part of her training. It might be of interest to note that the tendency to draw from the elementary grades seems stronger in the Atlantic states than in the Central and Western states.

From the foregoing we may infer the following: (1) That teachers for the junior high school are drawn in almost equal numbers from recent graduates of training institution and from the forces of experienced grade teachers, (2) that the former, or novice group, need the student-teaching for the sake of acquaintance both with the junior high school child and the junior high school as an institution, (3) that the latter or experienced group need the student-teaching at least for the sake of acquaintance with the junior high school as an institution, assuming that their experience has already acquainted them with the child, (4) that the student-teaching must be of junior high school grade, because what is needed is training for the *special* work of the junior high school. Experience in teaching in the grades is evidently not accepted by the school men as a substitute for the junior high school practice. Possibly a typical procedure is that of the University of California, Southern Branch, which requires of the novice 2 semesters of student-teaching, and of the experienced 1 semester. These conclusions, based upon the demands of school superintendents, are concurred in by practically all of the professors of education and supervisors of teaching in the training institutions replying. The need for student-teaching for both types of junior high school teachers seems thus to be established.

(*B*) *The Demand.*—We saw that about half of the junior high school teachers are drawn from the ranks of those already teaching in the grades, and half directly from training institutions. But this does not mean that this distribution represents the demand. It is rather the index of the supply of those who, in the absence of adequate training, can be the most advantageously and expeditiously adapted to the new task. The general attitude seems to be that the immediate transfer from grades to junior high school is but an emergency expedient. Just as the junior high school buildings were at first usually reconstructed grade buildings, so the junior high school teachers were often reconstructed grade teachers; and often the reconstruction in both cases was too hasty for the good of the institution. Would there be a demand for adequately trained junior high school teachers if such were available? The few institutions that have really undertaken such training in a thorough way all report that they cannot supply the demand. As one teachers college writes, "We have more calls than we can supply; these teachers are getting the highest salaries paid for similar work." From the fact that over 90 per cent of the superintendents prefer candidates who have had student-teaching of junior high school grade, it follows that such would be given the preference in the matter of employment. The degree to which experience figures in the demand may be inferred from the fact that two superintendents out of every three do not consider extended experience a prerequisite for junior high school teaching, and that not one demands more than 4 years of experience. This would indicate that the trained junior high school teacher could be very likely to find a junior high school position at once, and surely within 2 or 3 years after graduation. Almost unanimously the superintendents demand from junior high school teachers no more teaching experience than they do from senior high school teachers, which shows that the "previous experience" obstacle is equal for the college graduate into whichever level of high school work she seeks to enter.

There is thus a demand for the adequately trained novice, and nearly half of the superintendents say they would be willing to accept them directly from college *if* they were adequately trained. Nor should we ignore the fact that the junior high school pupil especially prefers younger teachers. These seem to bring to the school work a freshness and enthusiasm which have a strong attraction for the child in the early "teens." However, at present the greater demand by school superintendents is rather for the candidate who, after experience in grammer grade work, returns to the college for additional and special training for junior high school teaching. The feeling seems to be that the experience with the younger children gives the junior high school teacher a better understanding of the attitude toward the personal work which ought to characterize the junior high school. So, evidently there is a real demand for both types the novice and the teacher with grade experience, provided both are adequately trained.

(*C*) *The Supply.*—Whence are junior high schools to draw their teachers who have had this training? Our questionnaire was sent to perhaps 50 institutions, both universities and teachers colleges throughout the United States, selection being made of those which seemed to us most likely to be offering the training for this type of work. A number said they did nothing whatever, and of the remainder only about half make any pretense of training junior high school teachers specifically for the work, while most of these say that their training includes very little of the specific work which this teaching position demands. The usual procedure is to permit students to do supervised teaching in grades seven to twelve indiscriminately, and to place them later in those grades of teaching also indiscriminately. They unanimously condemn the practice but retain it for the present. Only about two or three universities and the same number of teachers colleges really claim to offer practice work along the various lines of junior high school work. Evidently we cannot at present look to the training institutions for trained junior high school teachers.

Moreover, certain other factors tend to keep down the number of such students. As it is, students do not care to go into junior high school work permanently; partly because of the lower salary, and partly because of a tendency of "regular" high school teachers to regard such work as inferior. However, it should be added that the lower salary is not universal, especially in the larger cities, and that the discrimination in favor of senior high school work is decreasing as the requirements for the two types tend to become equal. Many states, however, certificate for the junior high school work on the basis of a 3-year college course, especially in the west; and this leads to lower salaries and professional standing with the result that students prefer to complete the 4-year course and thereby qualify to enter the senior high school field ultimately if not immediately. Until the salary and professional standing of the junior high school teacher are on a par with those of the senior high school teacher, there will continue to be a shortage of properly trained teachers for the work, and the bulk of the supply will come from these reconstructed grade teachers. As it is, one main reason why these latter are more sought after by superintendents is that they are more likely to enter the work wholeheartedly, and therefore to be more efficient and more permanent.

At the same time, we should not overlook the fact that many students will first teach in junior high school positions as stepping-stones to subsequent senior high school work; and indeed several superintendents have urged that the senior high school teacher have her student-teaching in junior high school work.

(*D*) *Character.*—Student-teaching should include the doing of the things the teacher will be called upon to do. In the case of the junior high school this must include those activities which distinguish it as an institution. In our questionnaire returns the superintendents suggested various elements that should be included in the training, the most notable ones being the following: (1) Extra-curricular activities, especially of a social character, such as club leadership, and boy-scout and campfire girls organization, (2) vocational guidance, (3) the study of the psychology of adolescence, individual differences, and personalized instruction (rather than mere subject-teaching), (4) junior high school organization, (5) project teaching, (6) the socialized recitation, (7) supervised study. Although some of these are much broader than the student-teaching, the teaching should include the application of all of them in the classroom and school life. It should carry the theory of them all into actual practice. The experience of the grade teacher pursuing advanced study ought to render possible for her at least a much broader type of student-teaching than the type now common in training schools. Without some such practice, the training for junior high school work can scarcely be called adequate or distinctive. That the pupils thus practiced upon would suffer no more harm than is the case with student-teaching in the grades or high school is the judgment of nearly all the superintendents replying to the questionnaire.

All of this involves a decided reorganization and expansion of our present student-teaching systems. Most of the latter are now little more than subject-teaching, and it is just that against which public school administrators are protesting. The reorganization of student-teaching for junior high school work is probably our next big task, and a task upon which almost nothing has yet been done. It is virgin territory. Nearly every superintendent on the list says that adequate training calls for nothing that the universities and teachers colleges cannot supply—but practically all say it is *not* being supplied.

And why not? The reason most often given in the questionnaire is lack of equipment. The colleges and universities have, as a rule, no suitable school in which to offer the practice work. The difficulty is real, for the junior high school, if complete, demands much in material and staff, as well as pupil enrollment. Doubtless another reason is that we have not seriously attacked the problem. Our teachers colleges and even more our universities have been busying themselves with the training of teachers of subjects, rather than of children, with the result that the junior high school work has not been seriously attempted, and students have not been attracted to it. If the junior high school is to realize its promise as an institution, the training schools must undertake their share of the task. Each institution must both lead and follow the other. Just at present the junior high school is more or less consciously waiting for the training institution. We of the training institutions must bestir ourselves. It is our move, our turn to play.

Our conclusions from this study seem to be as follows:

1. Supervised teaching is needed by both experienced and inexperienced students in training for junior high school work.
2. School officials are asking for teachers thus trained, both experienced and inexperienced.
3. Our training institutions have as yet done practically nothing to supply this demand.
4. There is need for a special type of supervised teaching for junior high school work, including not merely subject-teaching but the varied activities that characterize the junior high school.
5. School superintendents are already awake to these facts, and are calling upon the training institutions to undertake the problem.

PREPARING TEACHERS THROUGH PARTICIPATION

H. L. MILLER

Professor of Education: Principal University High School

Inducting College Senior into Teaching.—Spell it *participation. Please* do *not* call it *practice-teaching.* It is a *participation* course on a life basis. "Participate every day every minute." That is the imperative to the prospective teacher. Silent contemplation in projected thinking is a high type of participation.

There are no bleacher seats in our school. We all play the game. Each player plays many parts. Be a real sportsman, one who takes his chance when he *ought,* not when he *can.* He does not aim at the sitting bird, nor strike the fallen boxer, nor quench the smoking flax. True sportmanship sweetens the competition of life, and is not puffed up in reminiscence.

The job of the college senior as the staff views it.

(*A*) Mr. X (college senior), will you explain at this point; give us the substance of the matter here; define our problem; set forth relevant data; step to the board and "chalk and talk" it, etc., etc.

In this general type of reaction the test for the college senior is obvious. Does he handle brute facts understandingly? Does he see what is essential and pertinent? Does he display keen appreciation of values? etc.

(*B*) Mr. X, what would *you* do *next?* How would *you* proceed at *this* juncture?

By frequent and snappy use of this type of procedure, Mr. X will become increasingly aware of his responsibility in the total situation. He is not merely to be apprised after the hour of his success or failure. The only evaluation worth a fig is the combined and immediate social evaluation by the group and staff teacher. Let us see to it that Mr. X takes his boots off, gets into the stream, stays in during the hour, and, if need be let us throw him into the deepest and swiftest parts of the current.

(*C*) Mr. X, rising above pupil levels (if he does) by gradual, progressive, and continuous experimentation must be winning, continually winning, his position by clearly demonstrated merit as a working associate with staff teacher and fellow pupils in the various forms of partnerships and group activities developing within a class period conceived as an hour of active work with each member of the group gripping and being gripped by a real job. But, we (staff teachers) must not fail to understand that our responsibility is increased in every instance of sharing it with college senior or pupil in any forms of partnerships or group work. When we delegate responsibility we do not thereby shed that responsibility.

These suggestions are hardly the A, B, C, of our procedure. Each one has a thousand ramifications and must take on new meaning with every situation. You (college senior), are making your own record. In your *diary* each day, focus upon what you deen significant in, your own developing experience.*

(*A*) *Definition of Education.—The task of education,* as I see it *is the production of a people capable of thinking, and with a mental attitude which is tolerant, fearlessly honest, expectant of change, and creative.*

Our schools have carried down the past tradition of "learning" as the acceptance of facts, while what we need is a mind capable of analyzing problems in the light of facts.

We have had our educational programs based on certain given analyses of human nature, "instincts," and so forth, when, as a matter of fact, psychologists cannot agree as to what the instincts or elements of human nature are. We have only a mind-body organism sensitive at every point and capable of being molded by whatever stimuli are presented. We *make* the human individual; and educational mass production on a uniform plan is surely not our highest hope.

The creative thinker is the hope of our human future and the great teacher is the one able to stimulate curiosity, to instill interest in searching for knowledge, and enthusiasm before the challenge of a problem. This shift of emphasis in a new general method will serve to create the new teacher in the stream of life.

You see, I am taking it for granted that we shall never use the public educational service to impose any *one* form of political, economic, or religious belief. This is the darkest sin against the future. *The test of our educational system is—does it develop individuals who are vividly alive to the achievements of the human spirit in the mastery of nature, and capable of creative thinking.*

The Conventional Procedure.—The schoolrooms of the land present the spectacle of straight rows of identical desks at which sit children and youth of the same age, supposedly endowed with the same instincts about to burst forth at given levels, and therefore to be treated all alike. And when the method fails, democracy is blamed instead of the mistaken science. All this comes from the acceptance of instincts and other elements of human nature *as data,* instead of working hypotheses.

Instinct tends to describe us *en masse*. Regimented mediocrity is the outcome of organization under this view. "Temperament," emotional complexes, habits of work and habits of thinking tend to emphasize differences. If these fluid and mobile elements could be adequately appreciated and if a technique could be projected by which to work forward into ever-new situations and learning syntheses, there would be made then an available supplement to "intelligence tests." Not until that time comes will we be out of the danger of using the latter to buttress fallacious arguments about native endowment and all sorts of unknown elements in human nature. There is, in brief, no agreement concerning the elements we inherit nor is there any scientifically sound basis upon which to negotiate procedure in terms of alleged native capacities.

Nine hundred and ninety-nine of 1000 parents send their children to school in the belief that the teacher is in possession of something which he will pass on directly to the child—the seal and wax conception. The conception of education as development is only gradually taking place of the conception of education as acquisition. Teaching and instruction are still thought of as directly analogous to instillation or indoctrination.

The same idea permeates the thought and practice of the majority of teachers. Text books are accepted on the same theory. Even the position of the teacher in the room betrays the business of impartation and instillation. School architecture is built on the same assumption —furtive pulpit, the mourner's pew.

"A taught me mathematics" too often means that A instilled into me some of the knowledge *he* possessed, that he inoculated me with it. Surely that is superficial and erroneous. The fundamental truth is that he put me *en rapport* with mathematical processes, and such success as was attained is properly described as my adjustment to this quantitative aspect of reality and that of it to me. The adjustment was not of me and him, but of me and this department of truth. And the issue is vital. For we all know that A sometimes is so imbued with the conception of instillation that he is a positive hindrance to adjustment, well meaning and enthusiastic though he may be. "In other words, in the language of an eminent mathematician, "Some children are born imbeciles; a great number are made so by the methods employed in education." Tens of thousands are dwarfed and stunted and corrupted to the very roots, only by lack of opportunity.

The Feel and Drift of Participation (from the college seniors' diaries).—Miss B. (at the beginning of her work).

"These last 2 days during which I have been participating in geometry, I have wondered if the character of boys and girls has changed from the time when I was in High School. As I remember, our class was always trying to get out of work *but this one works all of the time.* I have not heard one of the good excuses, I have lost my book, etc., that we used to give our teachers for not having our lesson mastered, so that we could escape as much work as possible. The attitude of this class is almost the same as if they were working at home, in that they seem so entirely free from self-consciousness and timidity. To-day I was very pleased when Mrs. V. asked me to act with the leaders of the class and hear some of the propositions and exercises. Although I must confess that my voice simply *would not* sound normal and I was somewhat afraid that I would be unable to do some of the exercises which I had done at home, or that I had not done. At first facts just seemed like a jumble in my mind and I could not find the needed ones."

Miss L. (the third day).

" 'The American movement does not follow a road already made, the road is traced as the movement goes on.' I can not express in my own words as well as the above expresses the activity in which I participated to-day. Instead of the deadly formalism of which so many classes suffer, where the formal question and answer system holds sway and where the teacher feels that she must get a certain number of questions answered, we had a *thinking* group. My mind was taxed harder in this class than in some of the classes on the hill (university classes). We had a problem set before us. Everyone was on the alert—not because we were afraid that it was about time for our names to be called, but because we had our attention attracted to a problem to be solved. Not one child was able to repeat in parrot-like fashion what he had read in the book because the questions could not be answered that way—they required thinking. We heard such statements as this one: "I don't know, but I know how it can go." He submitted his answer to the problem and it was all right theoretically, but somewhat impracticable. He showed that he was capable of thinking if he was given a chance."

Miss S. (well on in the course).

"In my preparation for to-day I found that I could translate the sentences on the page assigned, give constructions, etc. with no difficulty. What I did was substantially as follows: I detected a possible reference to the gerundive construction. I was not sure that I would need to explain it inasmuch as I had not a predetermined plan to follow in detail. So I went over that pretty thoroughly so that in the event I should be called upon or in case I had an opportunity to make use of the gerundive I could acquit myself with credit. I thought of some possible stories, suggested by certain material in the sentence exercires. So I reinforced my supply of stories and allusions. Then there was, it seemed to me, a good chance to work on derivative blanks, in case we got along well in the class period. So I arranged some extra material along this line. In all, I spent about 2 hours in getting a clear background upon which to focus this particular work for the day. Needless to say, I did not expect to use all these points I have mentioned. Nor did

I go into detail with minute plans as to how I would proceed if called upon to respond in any one of the many ways this opportunity presents. I am fully aware now that I must have at my command a hundred times more than I can hope to use in a particular class period. One must be fortified in many ways to cope with pupils in a classroom where all work forward and no upper limit is set for anyone."

Miss L. (college senior just getting into the game).

"I was under the impression before I entered the class that teaching was a "cut and dried" proposition. The teacher, I thought, was supposed to pick out a certain number of questions to ask and to insist upon getting through these questions no matter what turned up during the hour—that is, the teacher was not supposed to analyze the situation from the point of view of the pupil, but merely find out how much or how little the pupil knew. Quiz sections are often of this nature. I have seen a different method tried out here. By skillfully presenting a problem in which we were all interested, the teacher received the cooperation of the entire class. Who is not interested in finding out how the telephone works? But can not this interest be stunted by too much theoretical study before the problem is discussed? At any rate, we all stayed with the teacher during the period. Perhaps I am finding out what the word *participation* means. At any rate, I think that each day I am coming to realize how much I have in common with the children. Margaret and John have the same problems to solve as I have. I realize more and more that a great amount of material that I thought I understood was simply memorizing. The presentation of these apparently simply problems have brought about the revelation."

Mr. K. (Staff teacher, Prof. G. B. Mortimer) (final reaction.)

"Eighteen weeks of almost constant contact with a directly participating high-school class, as a member of the class, has given me some new realizations in regard to the field for which I am fitting myself, and has clarified a good many points upon which vague questions had presented themselves before. A large part of the benefit of the course will become more apparent to me, I feel, when circumstances arise in which this training will be needed—it is impossible to analyze and reduce to writing all the impressions and changes in viewpoint and attitude which I feel have actually come about.

In the first place, I have become thoroughly "sold" upon the idea that the teacher's preparation for each class period must be thorough, definite, comprehensive, and so humanized with related and unrelated facts which may be used for illustration that the material as placed before the pupils will be complete, well organized, well-rounded and interesting. I want to have the general outline of the day's work so definitely in mind that I can proceed without hesitation from one topic to another, (being always ready to make use of any turn which the class discussion may take), bridge over any transitions that may occur without interruption, or throw a cable back into previously covered material to establish the unity of the course, as the occasion may demand. I have seen this done in innumerable instances this semester, and in my turn at demonstrating, some of the difficulties of the procedure have been brought home to me. I know that I am to attain the success at teaching which will make that profession worth while, a positive and exhaustive knowledge of the subject matter to be presented, to

a point well beyond that which I hope the class will reach, together with an infinite store of supplementary knowledge, are absolutely imperative.

I hope that circumstances will never compel me to use the cut-and-dried, hopeless, purposeless procedure to which I was subjected as a high school student. There has been such real interest and enthusiasm on the part of the students as they helped to develop the course, that I am sure they have grasped a large part of the subject matter presented, and at the same time have gained an appreciation of the beauty and intricacy of the whole field of Agriculture.

One of the personal attributes for which this course has shown the need is an ability to analyze and direct the interests of the individual members of the class. We have had here such widely varying types that one might be tempted to suggest that the class be divided, yet it seems to me that each pupil has benefited from his work to the maximum of his capacity. Perhaps that intangible quality, *personality*, is the key to the situation, and it is one of those qualities for which I have never yet been able to definitely assay myself. I believe, however, that having resolved to undertake teaching professionally, possession or lack of this quality will mean little in determining our attitude—if one has a clear, masterful personality, he must work hard on subject matter ot be able to make use of it; if this is lacking, the problem is to master subject matter to overcome the handicap, and to develop a grasp of ourselves and an ability to lead which will sooner or later take the place of an hereditary leadership. In either case, failure to develop consciously in self-control and leadership will lead to death and decay.

The possibilities open to the teacher of agriculture have come home to me—at least some of them have. The wealth of materials, the closeness of the subject to the lives of the pupils, the possibility of infinite growth for the instructor as well as the class, might be considered secondary. Even greater are our opportunities to bring home to the pupils some appreciation of the dignity of the profession of agriculture, to show them the miracles of nature, and to help them orient themselves in their relationship with the rest of the world.

I think I'm "innoculated."

Mr. S. (final reaction).

"I have finished my course in *Education A* firmly convinced that the problematic, directed procedure method of teaching is a very live vital method of teaching. It is live because it does not deal with subject matter as subject matter, but it deals with the child as an individual unit. It involves the idea of a plan that is to be carried out, and the child in grappling for an interpretation, in utilizing material toward that end, is bound to move forward and to grow. That is where the term "directed procedure" comes in, for the instructor acts as a director of activities; he merely leads the child's activities into the channels whereby the child is likely to profit most, instead of allowing the child to be sidetracked into some minor irrevelant material.

The ability to think clearly and logically and to solve problems confronting one quickly and correctly is the best asset any man can have if he wishes to succeed in the world. And the kind of teaching which enables the school-boy or school-girl to develop that asset to the highest extent is the kind of teaching that is worth while. Directed procedure, if handled by a capable director does develop the child in that respect, for the classroom hour is spent in developing and solving

problems, the solving of one problem giving rise to other problems, which in turn are left to be solved in order to obtain a solution for a big major problem.

In treating the child as an individual unit the instructor is able to develop the possibilities of that child to a far greater extent than if the child were treated merely as one among many. Every child has to be handled differently from any other, and it is up to the instructor to find out just how Bill or how Mary should be handled to produce the best results. This undoubtedly requires keen insight into children's nature and also requires personality and tact on the part of the instructor. But no matter how they are handled the dominant purpose of the instructor should be to make them think and think hard. The only way a child can be made to think is to give him something of interest. Therefore it is up to the instructor to obtain that interest and then direct the resultant activity into the correct channels.

In order to do this the prime prerequisite of the instructor is sound and thorough scholarship. That is the crux of the entire problem of teaching through directed activity. Without it the instructor is lost and must revert back to the recitation form of teaching, where he merely has to ply questions based on a text and then accept or reject the answer according to the correctness of the answer to the material in the text.

In good directed procedure teaching, however, the instructor cannot look to the text during class, but he has to base all the activities, both his own and those of the students, upon absolute unquestionable knowledge of the subject. This means careful preparation before class and it means outlining the procedure which is to follow days in advance. By this I do not mean that one maps out a cut-and-dried outline which must be strictly adhered to. That is virtually impossible under this method. But it does mean that one must have a rough outline of what is to follow, otherwise there will be a continually hopping to-and-fro and no logical sequence of the main facts. To obtain logical sequence it is always necessary to remember that what we think is logical may be very unlogical from the childs' point of view. The young boys and girls with whom one deals haven't had the experiences that one has had himself, and hence their logical thoughts may flow very differently than do ours. The thing to do is to treat the subject logically from the students' point of view. For example, we might think it logical to begin the study of corn with the places where it is grown, its importance and its origin. The young student, however, who has had little experience with corn wants to know what it looks like and how it grows before he learns about its importance. . . . .

Directed procedure teaching enables one to utilize a wealth of material to very good advantage. In solving problems constant associative ideas and principles must be worked in to put the unknown on a known basis. For example, it would be hard to show the effect of heat and cold and frost upon rocks without bringing into the students' realm of thought common every-day occurences. The fact is one of the biggest assets of this method of teaching. It is not limited or hide-bound by such a mere thing as the name of the course one is teaching. Absolutely nothing is too irrelevant, just as long as it helps in solving the problem on hand. The only limitation which should be considered is that one shouldn't be constantly sidetracked into minor problems which do not aid materially toward solving the major problem. There should be a constant movement toward a goal, and absolutely anything which is within the possibilities of being grasped by the students, which doesn't take up too much time for the amount of good that it does, and which aids materially toward solving the problem on hand can be taken up to good advantage. I do not mean that one should never take up anything which hasn't any bearing on the problem, for one occasionally may do so to the entire benefit of the students, but the general trend should be toward a definite goal. As to deciding what associations to bring out, that depends entirely upon the problem on hand, the students themselves, and the instructors' experiences and knowledge of human nature. . . .

One of the very decided advantages of the directed procedure method of teaching is the fact that the assignments are never limited or set. When working out a problem the work is never finished until that problem is solved, and even then it isn't finished, for there are always connected problems which need to be solved. The assignment is definite in that it applies to a particular problem, but there is nothing in the assignment which prevents Mary from reading five times as much material as James. The students' work is never finished, and the bright and industrious student who is ambitious enough to 'go after' the problem and to learn all he can in order to solve it, gets ahead far more rapidly than he could under any other system. The best part of it is that most of the students become so interested in the work that they learn all they can on their own initiative. It is up to the instructor to conduct the class in such a manner as to keep the students interested by giving them live discussions and problems. . . .

In conclusion I may say that the directed procedure method of teaching is based upon definite but indeterminate assignments, it deals with the students as individuals, it develops the reasoning power of the students, and it requires skillful questioning, directive ability, deep insight into human nature, and, above all, absolute unquestionable scholarship on the part of the instructor. . . ."

A New Procedure.—The practice of assigning daily lessons and the practice of hearing the lessons "said" lead inevitably to formalism and verbalism. Keeping the class in order is the first necessity in that program. Teachers who start with discipline usually get no further.

Regimentation calls for elaborate "methods," setting the objectives by the local-stop schedule, prescribing the detail, ordering the steps in the process. The assumption is that somebody can actually show another how to teach. Hence a class of 30 pupils is regarded as a unit, and the avowed aim is to produce a regimented mediocrity. The minimum essential is dwelt upon with some devotion as to make it the maximum necessity. Good teachers under the traditional recitation system are able to break up the uniformity and secure a little private initiative in work about the hurdles set.

To start with the pupil as the educative unit and to work toward such unity as is desired by substituting the corporate spirit for regimentation will insure a new general method which enables the teacher to see in 30 pupils 30 unique systems and also to understand that difficulties do not come by the clock. The new teacher is expectant of change. The new teacher lives in the new world—an open world in which new species can actually be developed, in which our human nature is built in the stream of life. Work on the life basis can not be *methodized* and *regimented*. Ours is no cut-and-dried system, but a continuing impulse to unify and coordinate our ideals out of individual activity. We pass from the pupil as recipient to the pupil as reacting agent. Plan is not bestowed from above; plan is inherent in the process, self-originating, self-law-giving, imminent, constant, and growing.

The new procedure substitutes the challenge for the lesson. It may be a challenge of a day or a month or 6 weeks. It may be a simple problem or a whole book of geometry; the Monroe Doctrine, or the place of modern science in the life of man. Mastery of the challenge or self-mastery in the challenge is the new appeal. The new teacher does not prepare himself to 'teach' a lesson of 10 exercises, or 5 pages, but he prepares himself to direct pupils (his class) within the challenge of which he must be the master. The unifying principle for the class group is the challenge. No two pupils in any class need to be in the same identical place in any challenge. Differentials are absolutely necessary in dealing with the problem of individual differences, with our 30 *unique systems* (30 pupils—in any class, no matter how highly selected. In fact, the more highly 'selected' the more varied becomes the activity). The highly 'selected' individuals will disclose endless differentiation under the release of powers. If a group of imbeciles could be assembled, a dead-level mediocrity might be approximated. It is curious that any sane person should expect regimented mediocrity among normal persons. Class regimentation, smacking as it does of the militaristic theory of life, employs Procrustean methods to fit the patients to the standard forms. Have done with this stupid call for "standardization!" A whole class doing the same thing, at the same time, in the same way, is a fine example of "intellectual goose-stepping" it according to Prussian methods.

Directing activity or study at the point of crisis, at the fork of the road requires a new technique, not found in books and courses on methodology. No two pupils arrive at difficulties at the same time. For economical purposes the whole class may be directed to a common part of the challenge. This is best done when some clarification of an organizing principle in the challenge is to be attained. Difficulties in the learning process do not come by the clock. All sorts of transmissions ahead are required in this new task. When it is desired to discuss a challenge (after working into it or closing it up) we may socialize procedure through varied forms of vital participation in the discussion procedure. Little time will be wasted in listening in complacent passivity to explanation. No time will be wasted in siphoning vacuums and in asking questions of Dick, Tom, and Mabel which the teacher knows perfectly well in advance they can not answer.

The new class period will be characterized by the *work spirit.* The test will be 100 per cent working efficiency by every member of the class, including the teacher. He will become a director of activities. He will be a consulting expert now, a guiding hand at another juncture, a counselor here, a checking agency now, a glorified umpire, a problem raiser, a suggestive adviser to the pupil at the point of crisis, etc. Such work can not be done by "methods." It can not be done by the ritual. The new teacher lives in the *open* world, always expectant of change. The new class period is dedicated to *work in freedom* and *freedom in work.*

Pupils in this procedure are induced to gain a sense of mastery. It is not a mere hurdling game. No upper limit is set for any one. The indeterminate (not indefinite) challenge (not daily assignment) is the new outlook upon subject matter. The test is mastery. Pupils may for purposes of economy prepare to spend an hour (or more) in writing at some specified time. Some 10 or 15 things in the big challenge may be selected and the pupils may have the option of selection and given 25 per cent for each thing done. This procedure will distribute the chance element. One-hundred per cent may be accepted as mastery. No good class in this new procedure would countenance any one who would deliberately plan to make just 100 per cent. It is possible to make 300 per cent or more. In order to avoid regimentation, let it be arranged to give any in the class who fall below 100 per cent a Saturday morning after further work in which ample time may be given, 4 hours or more, for a pupil suffering from defense reactions and negative protective colorings. And if the second effort does not indicate mastery, do it again. Working for mastery and refusing to tolerate anything less than adequate mastery will create a new life in our classrooms.

This is the new procedure in which our college senior enters for preparation through participation. It cannot be formalized, ritualized, dogmatized, methodized, stereotyped, standardized, or handed on *as such* by the "methods" makers. The teacher must rise to the level of creative thinking with his pupils. The most serviceable agencies in developing that teacher will be boys and girls on the job, in the class under the work spirit, constitution adopted and freedom in work guaranteed—never license, general indulgence, or the luxurious indulgence of idleness.

It means the extension of the laboratory idea to all of our work. It means the breaking up of the lock-step and all other alien forms of regimentation. It means the development of the corporate spirit and individual modes and excellence. Unity is built out of variety—the one—from many ideas—never a stupid uniformity of instillation and indoctrination. Pupils are never too young to begin this creative work; they are never too old to enjoy the method of Agassiz.

The 20th century calls for a new technique under the ægis of experimental questing, the scientific method. We want a people capable of analyzing problems in the light of facts and a people capable of finding "real reasons," not "good reasons," for their beliefs. Every subject can be attacked in terms of the scientific method. The artist does it as well as the scientist. The thinking man, or child for that, starts with some way of thinking, some questing no matter how groping, deals with data relevant and irrelevant, sifts evidence, sets up tentative goals, redefines his hypothesis in terms of the facts he uses and keeps the ways open for revision as new data are presented. Where there is no problem, there is no constructive (creative) thinking.

Participation in a shared life is a new appeal for the teacher. No status is tolerated. Merit counts. The new teacher is kept busy at the growing points. He will build his procedure and himself as the movement goes on. His will be a forward striving toward a flying goal. He will be able to test for mastery where there is the zest of life.

To be able to do *some next productive thing* in a moving situation is the real test for the college senior preparing for his profession in this new procedure. The work will be no less definite and exacting than in the best of the old procedure. The pupil will be given assistance at the point of difficulty. While individualizing education it will be clear that there must be no lesion of the social sense. A real sharing of interests is possible in the proposed procedure.

Alertness, perspective, responsibility, enthusiasm, initiative, idustry, resourcefulness, open-mindedness, a sense of adequacy, confidence, effective freedom, self-mastery, aggressiveness, dignity, capacity, assurance, and creative thinking are stressed in the plan of participation. The college senior is inducted into our new world order, an open world, in which he becomes tolerant, fearlessly honest, expectant of change, and creative. The new teacher of the 20th century will not carry down the past tradition of *leaning* as the acceptance of facts, beliefs, conclusions and arguments, but will seek to become a problem-raiser and an assistant in problem solving, cunningly setting the environment for the challenge in the new classroom conceived as a work shop. The prospective teacher in the participation plan wastes no time in trying to keep pupils in order. The kiddies are wise to that game. It seems unprofitable to have the endless repetition of new candidates practicing on "wise" youngsters in all the non-essential and aggravating matters of the old recitation system. The work spirit with no upper limit for any pupil undercuts the petty disciplinary matters of the old order. We close by referring the reader once more to the excerpts or diaries written by the college seniors. The samplings are intended to initiate thinking along new lines. The plan of participation seems to orient the prospective teacher to a new outlook upon the possibilities of education in terms of real challenges. The new teacher will run up against regimentation and all sorts of self-created obstacles in the system out in the field. This somewhat discouraging aspect of the problem is left to the imagination of the reader. Suffice it to say that the writer's experience in this new procedure has convinced him of two outcomes: *The college seniors go out with a fine enthusiasm for teaching and they complain to their supervisory colleagues that no matter how long the class periods are the first day of school, they are always too short.* A 60 to 70 minute class period is none too long for these new workers.

ESSENTIALS IN THE SUPERVISION OF STUDENT-TEACHING

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The first essential in the supervision of student-teaching is that of securing a thoroughgoing preliminary preparation for the teaching before the student-teacher is assigned to the work. This preliminary training should include directed observation in connection with the fundamental courses in education, which are required of all candidates for teaching. The directed observation should be supplemented by apprentice teaching; that is, assisting the critic teacher by performing much of the routine management of the work. These routine matters should include such details as keeping the attendance, preparing materials, setting up devices, grading papers, etc.

The purpose of the apprentice teaching just suggested is to train the prospective teacher in good habits of school management. The student who has performed these routine duties until they have become practically automatic, is freer to concentrate his mental energies upon the teaching goals and the teaching performance. That is to say the habits of management having been fairly well formed, the student-teacher will not be forced to struggle with the attempt to form habits of good technique in teaching simultaneously with the taking on of habits of management. This simplifying of the situation in regard to the habit-forming demands is one of the most important factors in effective supervision of student-teaching. The usual situation thrusts too many habit demands upon the student-teacher at one time and the difficulties of supervision are thereby very greatly increased.

Another important factor in supervision of student-teaching is the manner in which the student-teacher is inducted into the work of responsible teaching. Even though the student-teacher has been trained through directed observation and an adequate period of apprentice teaching, he should become thoroughly acquainted with the teaching situation before taking charge of the class with full responsibility. This basis may be secured through a short period of intensive observation and gradual participation in teaching. The importance of this is not aways appreciated by those who are in charge of the work of the student-teacher; hence the student is often plunged into the situation with little or no understanding of the personnel of the class, the various elements that figure in the management of the particular group, and the individual needs of the children in respect to the subject-matter that is to be employed in the teaching. This sudden plunge demands so many expert judgments and so many ready adjustments that frequently student-teachers fail to meet the situation satisfactorily. They become confused, uncertain, frightened, or discouraged, and perhaps in attempting to secure control in discipline, they not infrequently adopt a personal attitude and technique of procedure that creates antagonism and strong prejudices on the part of the pupils. The spirit of this antagonism may be so strong that nothing that the teacher does later may be able to overcome it. The result is an initial failure on the part of the teacher. The responsibility for the failure, however, should not be charged entirely to the teacher. In fact it is largely the supervisory handling of the situation that is at fault. A wrong technique of procedure in introducing the student-teacher to the responsible duties of teaching has invited failure on the part of the teacher.

Closely related to the factor of the method of inducting the teacher into the intensive work of teaching is the factor of responsibility. The teacher should become fully responsible for carrying on all of the duties of the teacher in the same manner and degree as devolves upon the teacher who regularly employed to teach in a public school. The gradual induction of the teacher into these duties makes it perfectly fair to expect the student-teacher to assume the full responsibility of the teaching situation within a short time. From this time on the student-teacher should be given ample opportunity to make decisions and to deal with the problems that arise, independently. The teacher should be held strictly responsible for the results of his work and suggestions on the part of the supervisor should come as largely as possible at the request of the student-teacher.

One of the most important factors in supervision is the development of ability to locate problems and to ask for definite suggestions on specific points. The student-teacher is too wont to say, "What criticism have you of my work?" This attitude on the part of the teacher simply means that the situation is not a constructive one. The constructive opportunity of the supervisor arises when the student-teacher says "I am in doubt as to how much time to give to this phase of the subject," or "I have not been able to discover the reason why the faithful effort of this pupil does not enable her to master the work," etc. That is to say the point of departure in effective supervision is the teacher's realization of definite problems in the particular teaching situation. If the teacher does not realize that he has problems and that the problems are not being solved, be sure that the supervisor must undertake to bring the teacher to a full realization of these problems. No really constructive suggestions can be given until the teacher undertakes to solve a perfectly definite teaching problem. The important question for the supervisor to keep constantly in mind is, Why does this teacher fail to realize the problem in this case or that? Until this question is answered with some assurance, the supervisor has no positive ground upon which to attack the solution of the teacher's difficulties.

The supervisor will not carry on the work of supervision in this constructive manner unless he has set up definite goals to attain in the training of the student-teacher. The definiteness with which the supervisor conceives the problems involved in teaching technique, the problems of method, the problems of devices, the problems of diagnostic analyses of pupil difficulties and pupil types, etc., is one of the far reaching factors in thoroughgoing supervision of student-teaching. The supervisor very frequently fails to be of real help to the teacher even when the teacher realizes a definite problem, just because the supervisor fails to analyze the situation thoroughly enough to locate the part that technique, method, devices, etc., play in the satisfactory handling of the teaching problem. The supervisor may recognize that the performance of the teacher is unsatisfactory, but be unable to point out whether it is faulty technique wrong method of attack, inadequate devices, or what not, that is the fundamental cause of the poor teaching. On the other hand the teaching performance may be highly satisfactory and yet the supervisor is unable to say definitely just what pedagogical elements contributed to the successful performance.

Another factor in the supervision of teaching is the clearness with which the student-teacher conceives the entire unit of subject-matter in the particular subject being employed in the teaching. The teacher should know thoroughly the whole ground of materials to be covered in the year even though he or she will teach only a quarter, or a semester, or whatever the minimal time may be. The teacher is too apt to prepare for the day, the week, or the quarter without realizing the vital connection of what is done today, this week, etc., with what should be done tomorrow, next week, next quarter, etc. If the student-teacher is not required to work out the organization and presentation of each day's work in relation to the whole course, the performance will quite likely resolve itself into a perfunctory lesson hearing routine. Lesson hearing has been the bane of teaching for so many years that strenuous efforts must be made to break its grip upon the profession. A course should not be a given number of lessons to be learned, but it should be a body of materials so organized as to secure certain educational values in the training of the pupils. What these values are and the relation that each phase of the materials bears to the values should be understood by the teacher. To accomplish this goal is one of the critical factors in supervision if it is to result in a new type of teacher thinking and teacher doing.

A further factor in the supervision of student-teaching is the length of time the student teaches daily and the length of time over which the teaching practice extends. The student-teacher needs to teach for at least a half day each day in order to meet all of the problems that devolve upon the teacher in the public school. Moreover the teacher needs to become a part of the school, and this cannot be accomplished when the student teaches for one or two class periods and hurries away to other classes in which he is a student. The proper amount of time and attention to teaching plans, and the real assumption of all of the duties and responsibilities of a regularly employed teacher can hardly be secured when the student-teacher has so many competing claims upon his time. The teacher needs not only to teach for a sufficient length of time each day to bring the student into full relationship with the school, but the teaching should extend over a sufficient length of time to insure the development of real teaching efficiency.

The total length of time that should be required of any student-teacher may very well be a variable. The real goal should be a satisfactory degree of attainment instead of a certain period of time to be served in satisfaction of a minimum requirement. Experience leads one to say that a half year would be highly beneficial for most student-teachers and under the right kind of supervision no cessation of growth on the part of the student would result from an even longer period of practice training. The time should be long enough to secure for each candidate a sufficient background of teaching knowledge, habits and skill to insure constructive development in teaching efficiency after the student has gone out into actual teaching employment.

Another factor that needs little discussion is the character of the training school in which the student does the teaching. Practical school room conditions are essential to secure practical results from supervision. The pupils should be of typical school age and ability.

The physical conditions, equipment, and the general life of the school should be comparable to those in the ordinary public school of the same grade.

A final essential factor that may be mentioned is attitude of the supervisor. The impersonal approach to the problems with which the teacher wrestles and yet with a humanly sympathetic understanding and appreciation of the situation is a highly important factor in stimulating the student-teacher to work faithfully and earnestly in mastering the complexities of the work. Not critical intellectual coldness is meant here by impersonal approach, but rather the knack of making the teacher forget himself or herself in the study of the facts existing in the teaching situation. In fact it is nothing more nor less than the art of constructive criticism which builds upon recognized facts to the exclusion of personalities and personal feelings and emotions.

SUMMARY

No attempt has been made to incorporate all of the factors that might be considered essential to the successful supervision of student-teaching. The discussion has rather attempted to set forth a few of the highly essential factors that are not fully provided for in all supervisory situations. These factors stated briefly are, thorough preliminary preparation or training, gradual introduction to the full teaching responsibilities, the location of definite teaching problems by the student-teacher, the setting up of definite goals by supervisors, a clear conception on the part of the teacher of the entire unit of the subject-matter in each course, the length of time taught daily and the length of time over which the training extends, typical school conditions, and an impersonal attitude on the part of the supervisor.

GRADED UNITS IN STUDENT-TEACHING

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In order to provide the proper orientation for this paper some definitions are necessary. Graded units are phases of the teachers' work arranged roughly, in increasing difficulty and complexity and in the order in which they should be attacked by the student-teacher. Teaching is not limited to the different types discussed by Earhart and others but is used in the sense in which the term is ordinarily understood, to include all of the activities in which the teacher takes part in the course of her day's work.

The writer makes no claim to originality in devising graded units. Several training school people have been working on the idea for some time. However, although the material is not entirely new, the arrangement is original.

The material here outlined was presented first in Professor Bagley's Seminar in Normal School Administration during the summer of 1918. A tentative list of 29 units was at that time presented to the group for discussion and criticism and members were asked to arrange them in the order in which they should be taken up by student-teachers.

Since 1919 the plan has been developed with the cooperation of student-teachers, critics and supervisors in the Training Department of the Northern Normal and Industrial School, Aberdeen, South Dakota. Out of a process of elimination, substitution, combination, and addition 21 units have emerged.

With a view to perfecting the plan, further, copies of the units, together with an invitation to cooperate in the work of revision, were sent to members of the association. Answers were received from about one-third of those addressed. While time has not permitted a complete revision the order has been changed somewhat and the teaching unit has been expanded in the light of the suggestions made.

THE REVISED LIST OF UNITS FOLLOWS

1. Caring for cleanliness and neatness of the room.
2. Care of lighting, heating and ventilation.
3. Studying the classroom, building, and grounds to discover
    (a) Whether they measure up to desired standards.
    (b) What defects are remediable.
    (c) What can be done in the way of remedying defects.

4. Arranging seating with a view to meeting the needs of the individual child.
    - (*a*) Adjusting the seat to the child's height.
    - (*b*) Adjusting the desk top to the child's height and to the needs of different kinds of work.
    - (*c*) Seating the child so as to accommodate defects of sight, hearing and the like.
5. Visual presentation of material.
    - (*a*) Effective use of the blackboard.
    - (*b*) Arranging samples of the children's work for exhibition.
    - (*c*) Effective use of the bulletin board.
6. Keeping a record of attendance for the room.
    - (*a*) Study of the local system.
    - (*b*) Study of attendance problems.
7. Supplying the class with materials for their work.
    - (*a*) Requistioning materials.
    - (*b*) Gathering materials from different outside sources.
        - 1′. Periodicals.
        - 2′. Pictures.
        - 3′. Educational exhibits from manufacturing firms, etc.
        - 4′. Other materials.
8. Supervision of passing of children, the handling of materials, and other routine.
    - (*a*) Making the aim clear to the pupils before acting.
    - (*b*) Economy of time in carrying out schoolroom routine.
9. Studying children.
    - (*a*) Observe some child with a view to discovering his physical, mental and social characteristics.
    - (*b*) Rate the child as "below normal," "normal," and "above normal" in respect to each of the above characteristics.
10. Making the daily program of work, study-recitation, play.
11. Planning for the day or longer period.
12. Recording grades and preparing reports.
    - (*a*) Entering grades in the record book or on the individual pupil's card.
    - (*b*) Preparing the 6 weeks' report to parents.
    - (*c*) Preparing the reports for the principal or superintendent.
13. Studying the teacher (This should be done in a fair, impersonal manner).
    - (*a*) Observe your critic and note points under each of the following heads:
        - 1′. Personality.
        - 2′. Scholarship.
        - 3′. Technique of teaching.
        - 4′. Professional qualifications.
        - 5′. Results of teaching.
14. Working with the individual pupil.
    - (*a*) Teaching the pupil how to study the different subjects most effectively.
    - (*b*) Presentation of new material in such a way as to meet the needs of the individual child.
15. Supervision of play-ground work.

16. Health inspection.
    - (*a*) Diagnosing common diseases.
    - (*b*) Watching for symptoms of sensory defects.
    - (*c*) Testing for sensory defects in a simple way.
    - (*d*) Using the health record card.
    - (*e*) Correcting defects—nurse, clinic, physician, Modern Health Crusaders.
17. Testing the children's progress.
    - (*a*) Grading recitations, ranking children in the order of their ability in the different subjects.
    - (*b*) Preparing examination and test questions properly balanced as to thought and formal aspects.
    - (*c*) Administering standard tests.
    - (*d*) Scoring examination and test papers.
    - (*e*) Diagnosing results and following up to correct defects.
    - (*f*) Finding to what extent knowledge gained in a subject functions in other situations.
18. Working with the group or class.
    - (*a*) Instructing small and then larger groups.
    - (*b*) Arranging for and conducting extra-curricular activities.
    - (*c*) Class teaching, making use of different types of teaching.
        - 1′. The assignment lesson.
        - 2′. The study lesson.
        - 3′. The recitation lesson.
        - 4′. The inductive lesson.
        - 5′. The deductive lesson.
        - 6′. The telling or lecture lesson.
        - 7′. The appreciation lesson.
        - 9′. The testing lesson.
        - 10′. The review lesson.
        - 11′. The drill lesson.
        - 12′. The socialized recitation.
19. School discipline.
    - (*a*) Securing proper conditions for efficient school work.
    - (*b*) Insuring work 100 per cent of the time.
20. Interviewing and visiting parents.
    - (*a*) In the schoolroom at first.
    - (*b*) Making calls at the homes of the children.
    - (*c*) Under the direction of the critic or supervisor.
21. Getting a position and holding it. While this is not, strictly speaking, a teaching unit even in the sense of the definition in this paper there may be some justification for devoting at least one conference to the ethics of the situation.

The above units have to do with such dissimilar activities as classroom management, child study, playground supervision, school health, studying the teacher and actual teaching. In the light of our definition of teaching this seems justifiable.

The units vary greatly in the amount of time needed for their mastery. Just what is the optimum time for each has not been determined with any high degree of accuracy. It depends among other things on such different factors as the previous experience, intelligence and teaching ability of the student. The units having to do with the routine of the schoolroom require less time than those having to do with observation of the child and the critic, and obviously less than the actual teaching. Perhaps one-half to two-thirds of the time should be devoted to the last, *i.e.* actual teaching.

The order in which graded units should be taken up also varies with conditions. It would not always be necessary for a student-teacher to begin with the simplest unit in the list. Just which one should come first would be determined by one or more of the following factors:

(*a*) The student's native ability.

(*b*) The way in which the student's theory actually functions in concrete situations.

(*c*) The amount of experience which the student-teacher has had before coming to the training school. Some would be able to master the routine within a comparatively short time and spend a great deal of time in actual teaching.

(*d*) The needs of the situation. The right order as determined by our experience at the Northern Normal and Industrial School might not prove to be best order in some other part of the country under different conditions.

Other determining factors are the size of the class, the age of the children taught, the subject and type of teaching involved. Obviously it would be more difficult for a beginner to manage a large class than a small one; it would be more difficult to teach history or geography than spelling or addition of one or two place numbers; it would be more difficult to conduct a lesson for appreciation than a drill exercise. Besides, the unit with which the student-teacher should begin, the order of procedure and the rate of progress would be determined, in part by the ability and number of supervisors and other members of the training-school staff. To carry out the contemplated plan successfully, would require a larger staff than is ordinarily provided. It would be necessary to have all of the teaching done, at first, by trained teachers. This would make the load of the training school staff very heavy at the beginning of the year and would necessitate some sort of adjustment to meet the abnormal condition. Later, after student-teachers have taken over more of the instructional work, the regular force would have more time for other duties.

There are several valid reasons for using graded units:

First, the teaching situation is broken up into parts each of which stands out by itself and can be sized up from different angles and studied thoroughly. There is sound precedent for the procedure here suggested in the apprenticeship system. Throughout history it has been customary for fathers to instruct their sons in their vocation. In like manner, the mothers taught their daughters housekeeping. In neither case was it customary for the beginner to undertake the whole complex process from the beginning. Instruction was given, first, in some simple process which was followed by more and more difficult ones until the pupil was able to "carry on" at housekeeping, hunting, fishing, or what not.

Craftsmen have always made use of this system. For example, consider the case of the carpenter's apprentice. He did not begin doing the same things as his master. The first jobs which fell to his lot could hardly be called carpentering. At first he had to carry tools and other materials to the regular workmen. He learned the names of the tools and the carpenter's trade vocabulary. He was permitted to putty nail holes, lay a rough floor, put on sheathing, shingle, and put on weather boarding. Finally he was permitted to hang doors, put in window casings, and do other tasks requiring greater skill. The climax was reached when the apprentice had mastered all the intricacies of the trade and could build a house. All apprentices learned their vocations by the same slow process.

Apprenticeship has almost disappeared because machine work has supplanted hand work so largely in the manufacture of goods. After a long period of specialization on "piece work," during which a workman could learn a trade only by "stealing" it, industry has attained a new point of view. Those who enter some plants, now, are placed in a "vestibule school" where they learn the elementary processes before they actually go to work in the shop. When new men "go on the job" they are closely watched to discover who are worthy of advancement. Those whose ability seems to justify the extra training are placed in "upgrading schools" and learn more of the trade; finally they may hope to learn the whole process and become shop foremen or other responsible employees. Nowhere is the untrained workman left to himself.

Second, if situations are mastered one at a time and seen in their proper relation to one another and the whole process, self confidence is developed. The majority of student-teachers are lost in the complexities of the teaching situation for a time. Some never succeed in orienting themselves. Experience has shown us that it pays to segregate some particular activity and have the novice study *it* alone. Graded units afford the opportunity to begin in what is generally recognized as being a *good* way.

Third, habituation in certain routine duties is made possible. This is particularly true of such things as the adjustment of shades, the handling of materials, the passing of lines, and the like. Careful attention to such details with the necessary repetition under expert direction will result in a great deal of routine work being done subconsciously. The argument that such matters can be taken care of incidentally may be answered by saying that incidental treatment of any situation too often results in neglect. Specialization in any phase of the teaching situation is necessary to insure proficiency.

Fourth, certain standards or objectives are set up to be achieved in connection with each unit. It is doubtful whether these are provided for definitely enough under most plans of student-teaching. The result is that many teachers have to learn through wasteful experience a good deal of what should have been learned under careful supervision in the training school. Such a situation is not economical because many beginning teachers go to positions in which there is little or no supervision. The work of student-teachers can be inspected and rated more easily when separate units are being considered than when the whole complex, "teaching ability," is being measured. In conference the critic or supervisor can locate difficulties definitely. If the novice is weak in unit one, "caring for cleanliness and neatness of the room" or in some particular phase of the unit, the defect can be clearly pointed out and the necessary steps taken for its correction. This appeals to the student much more than our more or less general criticism which does not always locate difficulties specifically.

Let us consider a few adverse criticisms briefly. The chief danger is that of extreme mechanization and formalism. Formalism tends to make for efficiency in connection with the activity for which it specifically provides but teaching is not a formal process and should not be permitted to become one.

Students may become so dependent on the ritual as to lose their independence, to become mere "pattern followers" or creatures of habit. The emphasis might be placed too much on "ready made" solutions, rather than on clear thinking. This should be carefully watched.

In the hands of unskilled administrators and supervisors there might be a tendency for exceptional teachers to be retarded in their progress and for the poor or mediocre teacher to become weaker than ever.

Too much splitting-up of work might make it difficult for teachers to see the job whole. Practice teaching at its best is a rather "patchy" kind of process. Would a series of graded units tend to make the difficulty *more* acute? This would depend to a great extent on the genius of the training staff and their ability to adapt and make needed adjustments.

"The proof of the pudding is in the eating." Let us consider for a few minutes how graded units function in a practical situation. They are being used for the third year in connection with the course in Observation and Practice Teaching at the Northern Normal and Industrial School, Aberdeen, South Dakota.

Entering high school graduates usually register for the One Year General Normal Curriculum leading to a first grade certificate or the Two Year General Normal Curriculum leading to a State certificate. The former are required to do Observation and Practice for half of each day throughout the quarter of 12 weeks. The latter have half-day sessions for one quarter, followed by quarter-day sessions for one quarter.

Observation and Practice Teaching, as the name implies, consists of daily observation accompanied by considerable actual practice with the units under supervision. The amount of each is determined, among other things, by the student's ability, initiative, and willingness to do, together with the needs of the situation and the ability of the critic to help.

The Plant.—The plant consists of a Kindergarten room on the campus and 11 elementary classrooms including grades 1–7, in three different public school buildings. Students who are preparing to teach in high school are assigned to instruct in their major subjects in the different departments of the Pre-Normal School. (The South Dakota Normal Schools are required by law to admit eighth grade graduates for whom secondary subjects are provided in the Pre-Normal School Curriculum.)

The Training Staff.—The work in Observation and Practice Teaching is done under a Director of Training with a staff of three supervisors, grammar grade, intermediate, and kindergarten-primary, a trained kindergartener, and 12 public school teachers who act as critics. The Superintendent of the Aberdeen public schools acts as Director of Observation with the primary duty of looking out for the interests of the city school system.

The critics are on the pay-roll of the city and of the Normal School, receiving ten dollars per month from the latter. Their allegiance is divided, roughly in the same ratio as their salaries. The control exercised by the Director of Training and Supervisors who are on the pay-roll of the Normal School is only nominal.

It has been difficult to work out an effective system of teacher-training under these conditions but the suggested plan in this paper has proved fairly satisfactory.

In September, 1919 graded units were introduced at a general meeting. The rest of the year was spent in carrying on a campaign of education. The different units were discussed in meetings with the student-teachers, critics and supervisors and were worked out in detail.

At the beginning of the second year graded units were made the chief subject of discussion in all meetings and they were put into practice more consistently than was possible at first.

Outlines of each unit with full instructions, questions and problems for investigation were placed in the hands of student-teachers, critics and supervisors to be used as a basis for conferences. General conferences were held, daily, at first but as the student-teachers became more proficient in their work the number of conferences was reduced.

This year with increased knowledge and growing confidence in the plan progress is being made along the same general lines as last year. Weekly meetings are held by supervisors with their respective groups of critics with a view to discussing ways and means of putting the units into more effective operation. Critics are cooperating heartily in the matter of giving each student-teacher practical experience in each unit.

The Relation of Theory to Practice.—Too often courses in educational theory and practice are not closely enough related. In the Northern Normal and Industrial School most of the theory courses are given by the Director of Training or members of the supervisory force. An attempt is being made to make each course contribute its bit in making graded units effective. Such units as 1, "Caring for cleanliness and neatness of the room," 6, "Keeping a record of attendance," and the like, obviously have to do with classroom management and the fundamental principles are discussed in the management class. Unit 9, "Studying the children," is chiefly a psychological unit and it is studied first in the class in general psychology. Unit 15 which has to do with school health is taken up in courses in hygiene. Unit 16, "Testing the children's progress," is taken up in Technique of Tests and Scales, an elementary course in Educational Measurements. Unit 14, "Supervision of playground work," is taken up in the course in "Playground Games and Organization." Unit 18, "the teaching unit," is discussed first in the different classes in methods, primary, intermediate advanced.

In this way, from the first of the present school year, every theory course has been made to contribute as fully as possible to the teaching work. Extraneous material is being eliminated. Through the different conferences and actual practice in connection with graded units all of the students' professional work is made to focus as definitely as possible, on the concrete teaching situation.

It is the belief of the supervisory force at the Northern Normal and Industrial School that graded units have brought better results in the way of a more intelligent attack on teaching situations by the students and, consequently, greater benefits for the pupils than was possible before.

How would graded units function in a regular training school? Not having tried them out in such a situation the writer cannot speak with assurance. It seems probable that they would prove as useful in any other situation as in Aberdeen, especially in one over which the supervisory staff has full control.

In this day of scientific education the validity of any theory should be tested before it is generally applied. Graded units have been tried out empirically. Before they can be accepted, fully, they must be tried out experimentally and prove that they are more valuable than current methods of handling student-teaching.

To carry out such an experiment successfully it would be necessary to have two paired groups of student-teachers working under conditions as nearly identical in respect to nature of the children taught, the equipment and plant, supervision, and the like as possible. The experimental group would work with graded units as a guide. The other or control group would work under the conditions generally prevailing. It would be necessary to rate both student-teachers and pupils at the beginning and end of the experimental period in order to determine the actual amount of progress made by each group and to compare them. Such a study would surely help to put student-teaching on a scientific plane.

EDUCATIONAL NOTES

FURTHER NOTE ON THE HIGH SCHOOL SCHEDULE

In the December issue of *Educational Administration and Supervision* the writer had an extended review of Mr. Richardson's helpful and interesting monograph on high school schedule making.[1] Mr. Richardson has called my attention to several statements or inferences in the review which appear to him to be erroneous. In the case of some of these points I am still of the same opinion and the necessary brevity of this note would not justify me in taking space to repeat statements already made in the review. Rather I shall confine myself here to matters which, after examining additional data not published in the book, I now see in a somewhat different light.

It appears that it is not true that all members of a class section in Girls' High School have the same studies, as assumed on page 534 of the review. A wide amount of election is possible within the section. It follows that they do not have identical programs.

It was stated on page 533 of the review that there are very few double period assignments. It is true that there are few *subjects* for which double periods are arranged but in the upper years a large proportion of the *pupils* have a double period assignment on the program.

Thus on examining fuller schedule data from the school it becomes evident that the general situation is more varied and complicated than I had inferred from reading the book.

I am still of the opinion that the pupil's program is made, essentially, when the block numbers are placed on the "selection of studies" sheet; however the program is not completed in all its details until what I called the transcription stage is reached.

LEE BYRNE.

RESOLUTIONS ADOPTED BY THE WISCONSIN BOARD OF NORMAL SCHOOL REQUESTS

Be it resolved that on and after July 1, 1923, all courses offered in Wisconsin State Normal Schools shall be organized primarily and exclusively for the preparation of teachers for the public schools of the state; that the entire resources and energy of the Normal Schools shall be devoted to this end; that all subjects not primarily, definitely, and exclusively a part of a course for the preparation of teachers shall be discontinued.

---

[1] Richardson, Myron W.; "Making a High School Program." Yonkers, N.Y. World Book Co., 1921.

Be it Further Resolved: That beginning July 1, 1922, the several State Normal Schools are hereby authorized to offer four-year courses for the preparation of teachers of general academic subjects in high schools, such courses to be based upon the principle of major and minor subjects and to be subject to the specific approval of the Board of Regents in each case, admission requirements to which shall be graduation from a four-year course in an approved secondary school.

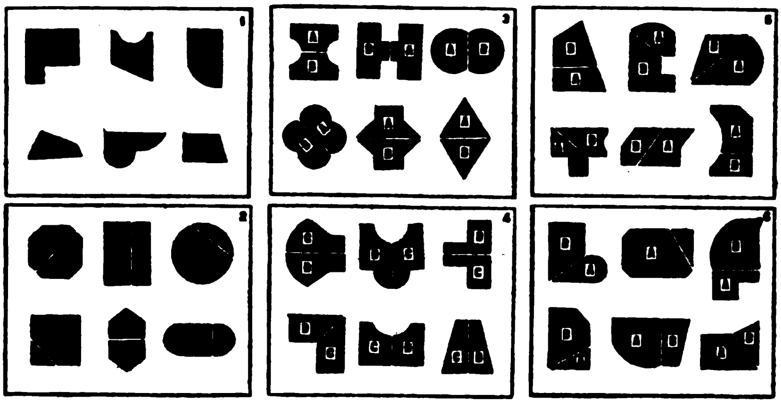
Be it Further Resolved: That beginning July 1, 1922, the several State Normal Schools which have special departments for the preparation of teachers of physical education, music, drawing, industrial education, agriculture, home economics, and commerce, are hereby authorized to offer four-year courses for such departments, admission requirements to which shall be graduation from a four-year course in an approved secondary school.

Be it Further Resolved: That on and after July 1, 1923, the college courses, so-called, in Wisconsin State Normal Schools, now existing under authority of Section ——, of the Wisconsin Statutes, shall be discontinued in all of the Normal Schools of this state.

In order to facilitate the carrying out of the foregoing program and to make effective its purpose, the following legislation is recommended and the legislative committee of the board is hereby authorized and directed to take whatever steps may be necessary to secure its enactment at the regular session of the Legislature in 1923.

First, that on and after September 1, 1924, a minimum preparation of not less than three years beyond secondary school for teachers of both general academic and special subjects in the high schools of the state be required; and on and after September 1, 1926, a minimum preparation of four years beyond secondary school for such teachers.

Second, that the Board of Regents be authorized to grant a bachelor's degree in education to students who have completed in a Wisconsin State Normal School a four-year course in preparation for teaching the entrance requirements to which is graduation from a four-year course in an approved secondary school.



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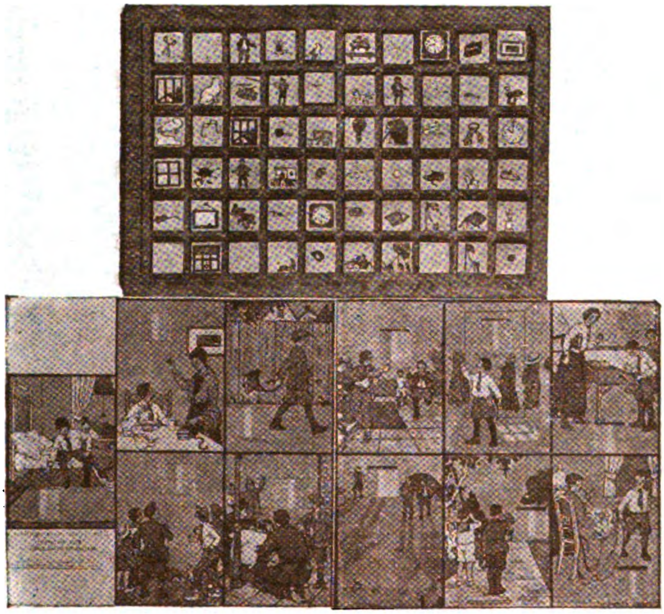

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IMPORTANT ELEMENTS IN DEVELOPMENT OF A SCHOOL BUILDING PROGRAM

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The school building is the most important physical agency or instrument utilized in the educative process. The school building is a means to the end, not an end in itself. The problems involved in school building planning and school building construction are mere resultants of the acceptance of an educational policy and the establishment of definite educational aims. In the past when the educational program had not been clearly defined and the conservation of health, the development of home makers, the vocational aspects of education and the like had not been given a place among the definite aims to be achieved, the school building problem was a simple one, indeed. The experience and practices of years have clarified the educational ends to be sought. With this development of educational aims has come the demand for school housing of such construction and character as to tax severely the community purse and to bring to the fore the questions of economy, adaptability and efficiency which too often have been ignored or overlooked in the past.

The school building needs of the country have grown to vast proportions. School bond issues for the past 2 years aggregate the greatest total of all 2-year periods in the history of public school development. In the year 1921, $240,000,000 worth of school bonds were issued in the United States. Estimated on the basis of present contracts undertaken in many communities and assuming somewhat similar needs in other communities approximately 1½ billion dollars must be expended on school buildings in the United States at this time to assure school housing conditions which will make possible the achievement of our accepted educational aims. City after city has accepted its responsibility and is assuming its share of this huge construction burden. Three-, five- and ten-million-dollar school building programs are being reported frequently. School systems with annual budgets for current expenditures of $200,000 or $300,000 are reporting bond issues for three and four times their annual allotments, for education. An increasing faith in public education is evidenced on every hand. The deliberate acceptance of the cost burden in many communities demonstrates clearly the deep nature of this faith. For the country at large, the funded debt assumed for public school purposes in 1921 was eight times as much as that incurred in 1916 for similar purposes.

The demand for a dollar's worth for every dollar spent has, however, become more insistent than ever before. The school building plant represents the crystallization of the highest ideals and purposes of community cooperation and community enterprise. The wide discussion of such ideals and purposes is developing a more critical public attitude toward community investments in school buildings as well as in the educational yield. Without the determination and acceptance of educational aims by the leadership of a community no satisfactory building program can be advanced. With the recognition of the ends to be sought through the educative process, the underlying principles of school building program development may be laid down. The principles which follow are not mutually exclusive but are of sufficient importance to require separate mention.

The educational organization decides the nature of the school plant and the character of the buildings. The age-groups to be taught, the curricula to be pursued, the individual variations to be recognized and the space and equipment to be allotted to every individual child are the elements of prime importance. Complete definition of the educational organization is essential. The educational organization must become a matter of practice and not remain an empty form. The school system which professes to have adopted a 6-3-3 organization and over a period of years permits every variation therefrom to exist without change has failed to recognize the educational economy that will result from the unification of its system. With the educational organization defined, the types of buildings and the comprehensive nature of the structures determined, no acceptable educational organization can profitably utilize any longer school buildings which are mere nests of classrooms. The modern schoolhouse is an intricately and wonderfully planned structure, offering every facility for advancing the complex and expanding curriculum program involved in the full concept of public education.

Financial and educational economy dictate the size of the individual schools. From the standpoint of economy, of operation, maintenance, supervision, and general administration, all available evidence is in favor of the large individual schools. One thousand- to 1200-pupil elementary school buildings, 1200- to 1500-pupil junior high school buildings and 1500- to 2500-pupil senior high school buildings are considered desirable when proper allowances are made for the size and type of the community. It is reasonable to suppose that educational economy will likewise result under conditions which permit of better classification, more frequent promotions and a greater concentration of special facilities than would be possible in smaller plants. Scientific investigations of the next few years may throw new light on the optimum size of school buildings from the angle of both financial and educational economy.

Standards of schoolhouse planning and construction must be determined by state authorities through rigid scientific procedure. The wider experience and the more comprehensive machinery of state education departments should be utilized more fully to safeguard communities from ill-advised planning and faulty construction. Neither the infrequency of school building construction in the small community nor the instability of administrative control in the large city should be among the reasons advanced for failure to secure buildings which become permanent community assets and fully adapted to the needs of the educational program. Local conditions may vary, but within reasonable limitations, local adherence to state standards is recognized as most desirable. State standards involving economy, the recognition of state educational aims, and the gleanings from the experiences of hundreds of other communities have no inconsiderable value.

To the degree that the conservation of health and the program of physical education are emphasized among the state aims in education, should the state insist upon adherence to building standards which safeguard the body of the child, leave his physical faculties unimpaired and offer opportunity for further physical development. The splendid progress made by some of the states may well serve as an incentive to those which still lag far behind.

The health and play programs of progressive educational organizations can be advanced only where adequate school sites have been provided. Four to 6 acres for elementary schools, 6 to 8 acres for junior high schools, 10 to 20 acres for senior high schools are standards which are being accepted by so many growing communities that their general acceptance seems inevitable. The very rapid growth in urban population in the United States and the extreme residential congestion of many cities emphasize the importance of making adequate provision in the school development program for plenty of air, sunlight and open spaces. The large percentage of physical defectiveness, humiliating to our national pride and contradictory to our educational aims, and the needs of our social development programs unite in emphasizing the importance of large school sites. When recent reports covering playground conditions show that 1,800,000 of 3,600,000[1] in 429 American cities have less than 6 by 6 square feet each of playground space or even none at all and that 70,000 children[2] in one of our largest cities have been provided with only 35 pieces of playground apparatus on their school grounds, the urgent need for the development of playground standards becomes clear.

No school building program can be adequately advanced without full consideration of city zoning and the policies developed by city zoning commissions. The value derived from scientific city zoning are being sought by many city councils or boards of aldermen. Zoning is the controlled direction of building development along orderly and well considered lines of city growth. This movement should receive the earnest support of all school administrators or when necessary should even be initiated by them in their communities as it doubly insures any investment made in new school housing. The hundreds of thousands of dollars spent in the construction of school plants, which, in a short time, have been surrounded by manufacturing, railroad and other industrial developments have not contributed toward the creation of confidence of the public in school administrators.

School building planning must anticipate population trends and should consider every element of adult and child population growth. Private corporations, such as telephone companies, have shown the way in the field of population analysis which may well be followed by school men. Telephone companies lay their cables and construct their exchanges not to meet present service demands only but in terms of future patronage. Every available population fact that may have its bearing on future growth is utilized in the prognostication of service needs. What private enterprise has found it profitable and possible to do, the school system may well adapt.

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[1] Know and Help your Schools—Second Report, National Committee on Chamber of Commerce Cooperation with the Public Schools, 1921. American City Bureau, New York City.

[2] The School Plant and School Building Program for Baltimore, 1921. Board of School Commissioners, Baltimore, Maryland.

The selection of school building sites should be on the basis of known population data and in terms of desirable environment standards. No longer should politics, personal gain or undesirability for any other purpose be the basis for selection of school sites. The anticipation of future needs based on housing types, residential saturation, transportation development and industrial sectioning, and the advance purchase of sites determine to a large degree the desirability of the future plant. Continuing map studies of population growth are essential administrative tools for success in this field.

Travel distances for present and future child population are factors to be considered. There has been a tendency toward standardization of the ½-mile radius for elementary schools, 1 mile for junior high school and 1½ miles and more for senior high school. The tremenduous overlapping in the elementary school districts of many cities, where the erection of small school buildings has been the rule, is evidence of failure to recognize the invaluable results of city planning and the gains to be secured from the establishment of distances between home and school which children of varying ages may be expected to travel. The degree to which pupil travel standards have been ignored in the past is evident in a recent city school building survey where 10 elementary school buildings were pointed out as falling within the district defined by a ⅜-mile circle being drawn with one elementary school as a center. If a child may, within a ½-mile walk from his home, reach any one of 6, 8 or 10 school buildings, the chances are against his finding any desirable, high-grade, fully equipped schools in this group.

A school building program is a continuing program. A prevailing fallacious concept is that appropriations for school buildings are to be considered necessary only at stated intervals and that such appropriations once made have solved the building problems of the community for an indefinite period. The school building problems of no actively growing American community can be laid aside with the assumption that the task is completed. Tax payers should recognize that the opportunity for developing and improving the school plant always exists. The aim of the administrator should be to keep his school housing projects so far in advance of actual needs that short-time sessions and temporary housing do not become necessary except in times of urgent stress. Attendance and census records should be so utilized that the physical facilities in space and equipment become available for the school child when the compulsory laws or the local custom bring children into school for the first time. The superintendent of schools who can say during times of peace that his community has a record of no part-time pupils and no unsuitable housing has demonstrated without question, his ability as an administrator.

The program of publicity developed in conjunction with building policies should be of a continuing nature and give clear-cut estimates of what the future building needs may be. Communities informed far enough in advance react more favorably when additional funds are sought for the further development of their plant.

School building planning and construction requires a specialized architectural skill and training, together with a knowledge of the educational field. In the field of school building construction, it has been a common practice for members of boards of education to assume the chief responsibility. This responsibility is not wisely delegated to lay members of boards of education with perhaps only a temporary interest in the problem, nor even to the architect who has not made himself thoroughly familiar with school problems and needs. Along with the rapid standardization of educational provisions has come the development of architects who have been willing to recognize the exceedingly complex nature of school building planning and who have equipped themselves to render a special service in the educational field. Only as boards of education assure the highest degree of cooperation between the educational forces which administer policies and the architectural forces which supervise the working drawings and specifications of school buildings, will investments in school buildings be guaranteed gilt edge.

Elasticity of planning is a positively essential element to be considered in plant development. Changing educational methods and administrative policies will necessitate varying adaptations of the school plant. During one decade study halls may be deemed essential, during the next they may be rated as superfluous. An elastic plan recognizes variations as concomitant of educational growth. School authorities who plan in terms of the ultimately desired structure, although only a fractional part is needed today serve the more intelligently. The wisest policy to pursue is to reserve for all time the possibility of addition to any plant except as positive assurance prevails that the optimum size has been attained.

Public school structures should be of a permanent construction in keeping with the nature of the program to be advanced. Unfortunately Type D constructions, consisting of masonry walls, but of otherwise ordinary or joist construction and wood finish prevails today in the case of 45 per cent of existing school buildings and even a less permanent construction in the case of 21 per cent more. Fireproof construction makes for permanence, lower maintenance, and repair costs, less fire insurance and greater community assurance in the safety of its children.

True economy in school building costs is not inconsistent with the program outlined above. On the contrary it is implied in every step. Real economy is effected only as the full educational program is understood, and as the physical agencies employed to achieve those ends are effectively utilized to the greatest degree, by the greatest number of people, over the longest period of time. Economy results when permanence is assured, debt, maintenance, and operation costs are kept at a minimum and the highest physical, social and educational efficiency of the product is achieved.

The new technique that is being rapidly developed in the field of program planning will strengthen the professional status of the superintendent and will establish more firmly his position as a community leader. Communities have felt the need for more adequate school planning. The school administrator can be relied upon to bend his energies to the solution of the difficulties growing out of such need.

MAJOR PROFESSIONAL COURSES AT TEACHERS COLLEGE, COLUMBIA UNIVERSITY[1]

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In most colleges of education the development of departments and courses has resulted in overlapping and consequent repetition. General departments of psychology, philosophy, and history, more specialized departments of administration and supervision, and the highly specialized departments of subject-matter in an effort to improve their work and make it practical have drawn generously on the fields covered by others. And courses devised for the needs of different groups of students have multiplied and tended to become more and more technical as knowledge of facts increases and new theories are proposed.

The result is that there are: (1) Unnecessary waste in repetition, (2) occasionally a conflict in what is taught in two or more departments or even in two or more courses of the same department, and (3) an impossibility for most students to take a sufficient number of courses to prepare adequately for any specified position. Moreover, although practical field work is recognized as a necessary supplement to theory courses, the schedule of recitations usually makes it impossible to arrange for field trips that require more than one or two periods without causing students to absent themselves from classes in unrelated subjects often taught by professors not too gracious in excusing absences for such purpose.

Such a situation at Teachers College several years ago caused the faculty to approve for each department of administration and supervision a major professional course preparing for specific types of work. There are now such courses for students desiring to be elementary school principals and supervisors, secondary school principals, normal school teachers, supervisors, and administrators, rural school teachers and supervisors, and city school superintendents. These courses are all offered at the same hour, at nine o'clock on Tuesdays and Thursdays, and continue at the pleasure of the instructor, usually all the forenoon, occasionally all day. They are composite courses in the sense that under the direction of the professor in charge each topic is presented by the instructor considered most competent in that special matter, whether a member of the department or not. These courses are supplemented not only by courses in the fundamental general subjects but also by minor courses for students desiring further specialization and for others who for one reason or another do not elect the major course. Following most of them is a research course for students pursuing work for the doctor's degree.

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[1] Presented before The Society of College Teachers of Education, February 28, 1922.

As one of the two major professional courses originally given, that for secondary school principals will be sketched somewhat more in detail. On the assumption that the majority of students preparing to be principals would remain for only one year of continuous study, the course was designed to treat as adequately as possible all the activities that the high school principal is called on to perform. An inventory was made of these activities—experience of the staff, existing courses, indexes of textbooks, and the opinions of students being drawn on freely for items. These items were then classified and weighted by each instructor in the department so as to distribute among them the 56 possible meetings. The weightings have been modified from time to time according as experience in the class and reports from alumni in the field have dictated.

The major professional course is credited with 12 of the normal 32 points of a year's work, but it is supposed to require half of a student's time. Besides the morning sessions, at which general topics of administration, supervision, and social control are considered, the class has in the afternoons of Tuesday and Thursday a 1 hour session at which specialists—*e.g.*, in social sciences, home economics, music, and health—present the point of view of the subject-matter departments, the main objectives to be sought, and a practical bibliography. These meetings are all attended by a representative of the department of secondary education, who at the end of each unit discusses it with the class and attempts to reconcile what is presented with the fundamental theories of the major course. At the end of each unit during the first 2 years the students reported in writing the elements of it that they thought most and least profitable for their purposes. These judgments passed on to the specialists have resulted in considerable modification and, from our point of view, improvement in the units.

Students majoring in the department have time left for courses in the general fields—psychology, philosophy, sociology, history, and comparative education—certain combinations of which are requisite for those who wish to take the written and oral matriculation examinations for the doctor's degree, and they usually take also from 4 to 8 additional points in specialized 2-point courses either of their own department or of some others.

The major professional course consists not only of the usual readings, lectures, and papers, but also of much field work and the preparation of material likely to be needed in the direction of a school. This material consists for the most part of selected and annotated bibliography, containing especially items that are easily procurable; outlines of principles and their detailed applications to such matters as the assignment, questioning, the socialized recitation, and the direction of social activities; and checking lists for the observation of classes.

The field work is of three kinds: (1) The visiting of various types of high schools to see how work is skilfully conducted by experienced administrators and teachers; (2) actual work in schools that generously offer opportunities; and (3) surveys. In and around New York there are high schools of almost every type imaginable, from the urban sex-segregated specialized school of 6000 pupils to the rural cosmopolitan school of a few score. Experience has revealed where we may find skilled administration of teaching of every kind, and to these places the students are taken (not sent) for observation. Usually the whole class visits together; at other times, in smaller groups. A cooperating group of high school principals, meeting at the college for dinner and discussion five times each winter, greatly facilitates the arranging of observation. Ten or twelve field trips are possible in the year. Because of the schedule of recitations it is easy to arrange for them to occupy the forenoon or even the entire day of either Tuesday or Thursday; occasionally they are on Friday. The observations made on these trips are of course discussed in class and an effort is made to deduce from them the elements most likely to be of profit to the students when they enter upon the administration of schools of their own. Emphasis is repeatedly laid on the fact that it is the purpose of observation to look for and to find merits to be imitated rather than faults to be avoided. There is small profit in encouraging the natural human tendency to see and emphasize weaknesses. The effective administrator or supervisor must have the skill to find the good, however embryonic or imperfect it may be, and the habit of building on that instead of merely attempting to remove petty details of inefficiency.

The actual work in neighboring schools is of several kinds. The class has at various times studied the record system of a school and proposed a plan for its improvement; it has studied the program of extra-curricular activities of another school and presented amendments likely to make it more effective; and it has after observation of all the teachers of still another school at work presented a report on the details of classroom management. Last year after a consideration of the principles that should govern teachers meetings and the observation of several held by hospitable principals, the class working in committees prepared five articulating programs for the consideration of questioning in recitations. One representative of each committee then led a teachers meeting in a neighboring school, all the members subsequently observing the teachers at work to ascertain to what extent the discussion had been effective. It is our belief, supported by the testimony of the men who have gone into principalships this year, that such an experience gives to them a preparation and power of inestimably greater value than theoretical instruction could ever do. Incidentally it may be reported that the work of the class in such practical matters has been sufficiently good to result in cordial invitations for other classes to repeat the activities.

The third phase of practical field work is that of the survey. Every principal should have the skill to make from time to time a study of the achievements of his own school, to prepare an objective balance-sheet that will to a large extent reveal wherein it has failed and wherein it has been successful. To this end the classes have studied the chapters of surveys that concern secondary schools, they have prepared an outline of detailed matters that should be considered, they have collected comparative data that may be used for standards, and finally they have applied their knowledge and plans in making actual surveys of schools. We have so far had no difficulty in finding superintendents and school boards who were glad to pay the necessary expenses of a survey in return for the information and recommendations that they get in return. We have had more invitations for such work than we could accept and at the same time insure that the students receive a balanced training for the positions for which they are preparing.

Reports from the students who have entered on principalships have led to certain modifications of the course, but they have confirmed our confidence in the value of the plan in the preparation of men for effective work. They go into the field knowing what their duties will be, with knowledge and material that will help them in their work, and with some experience both actual and vicarious. Following are extracts from letters that we have received.

"I arrived August 15, and found that I could use the time to advantage, especially as no plans seem to have been made for opening school. The secretary tells me that previously nothing was prepared until the pupils assembled, with the result that the first 2 weeks were of wasteful confusion. By hard work I had tentative plans ready and by considerable advertising we got 90 per cent of the pupils in on the first day, when we ran all classes on a twenty minute schedule. This was a surprise to the pupils, who felt as if we'd robbed them of a two weeks vacation, but the effect has been good.

"At the end of the first 5 weeks, I sent to each parent a form letter to which I appended a personal note about his child. If the student has done any commendable work we of course commended it. If the student had failed or done poor work the parent was told about it, and the cause given wherever that was possible. I was a little dubious about the effect of these letters. In every case we took pains to tell the exact truth as we saw it and I was fearful that the parents would not receive it in the right spirit. However, it seemed to be the only thing to do, and we sent out the letters. The letters have been out only a few days and I am glad to say that they were received with the right spirit. A number of the parents have called, phoned, or written and the general feeling has been that we are personally interested in every student and the suggestions we made were therefore valuable. We have already been able to detect a different attitude on the part of the student. Writing these letters involved a great amount of work which could not have been done if I hadn't had the help of one of the teachers and the entire office force. The present indications are that the results are worth all of the work it caused. Nothing like it had ever been done here before, and it has caused much favorable comment."

"I was convinced last May that this was the position I wanted. Just at present, I would not trade this job for any other at twice the salary. It is exactly the job I want. There are a lot of things to be done here, and I would like to see whether I can do them or not."

Such letters and other evidence leads us to feel confident that we have greatly improved the effectiveness of our department in its preparation of students for progressive professional work, and the same confidence is reported by the other departments. No means exist, of course, whereby a man with poor or mediocre talents and personality can be made a brilliant success; but there is no question that each one can be made better able to perform the tasks that are likely to be assigned him. The greatest difficulty now before such departments as ours in colleges of education is to break the long habit of superintendents and boards of education of selecting for a professional and highly important position of educational leadership on the basis of mere personality or long experience, which may have been deadening or at best restricting. The most convincing means of achieving this end is to prepare and send out men who have been given a sound basis in educational theory, a professional spirit, a conviction that the principal has a primary responsibility of leadership in the improvement of instruction and the social life of his school, well defined objectives, knowledge of the best practices, and a vision—in short, preparation for performing better the duties that will most likely be his.

PREPARING TEACHERS FOR THE URBAN SERVICE[1]

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The hypotheses which in my opinion should govern the development of curricula for the professional education of urban teachers do not differ fundamentally from those that apply to the professional education of other teachers. I may briefly summarize these hypotheses, then, before attempting to point out whatever adjustments or variations the urban situation involves. The hypotheses, I should say, are not to be looked upon as firmly established principles. They represent in part provisional principles fairly consistent with the facts as I know them, but of course subject to revision in the light of facts which I may not have taken into consideration. In part, too, they represent what I may call "articles of faith," which follow as corollaries from my personal convictions regarding the function of education in a democracy, and the relation of the teacher to the effective discharge of this function. I may be permitted then to state these hypotheses in the form of a series of beliefs or convictions:

1. I believe that the prime function of education is to conserve and extend upon as nearly a universal scale as possible what is best thought of as the spiritual heritage of mankind—the skills, the traditions, the ideas, the ideals, and the standards of conduct that have been wrought out of the experience of the race. I believe that practically all of the children of all of the people can, under the proper guidance, build into their own experience the most precious elements of this heritage. I consequently conclude that the two outstanding functions of the professional education of teachers are: first, to insure that the prospective teacher himself has come into this heritage, that he knows what it means, and that he appreciates keenly what it has cost in terms of human effort, suffering, and sacrifice; and, secondly, that he be sensitized to the difficulties that the learner encounters in its mastery, and given an initial skill in the fine art of adapting its various elements to the widely varying capacities which every group of pupils or students is likely to represent.

2. I believe that, while teaching resembles in many important ways the artisan trades, and in other ways the applied sciences,

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[1] A paper read before the City Training School Section, N. E. A., Chicago, February 27, 1922.

its important resemblances are not with the skilled trades like plumbing, carpentry, and bricklaying, or with such applied sciences as medicine, engineering, and agriculture, but with the fine arts. In emphasizing this analogy I recognize that any work finely done, any work into which the worker reads his own hopes and dreams and ideals, may be artistic work in the truest sense of the term. But I also recognize that certain types of work not only present possibilities for fine workmanship but make demands for fine workmanship that other occupations do not present or make in the same degree. I believe that teaching is one of these occupations, and I base this belief on the fact that it is the personal and human element in teaching that has always been recognized as the most fundamental. Without vision the nation will perish—but without sympathy, insight, and infinite patience on the part of the teachers of a nation the children of the people will not be able collectively to grasp the meaning of the vision and let it lead them onward.

Consistently with these provisional principles and convictions, I believe that the professional education of teachers for the people's schools should aim to select as far as possible those recruits whose personal qualifications for their important work are the most promising. Here the urban professional schools for teachers have a great advantage.

These prospective teachers should live in an atmosphere surcharged with the professional ideals until devotion to their work has become ingrained as second nature. Here the urban professional schools for teachers meet a serious handicap in the fact that they do not have their students under their control through the whole day or the whole week. They must, then, attempt to compensate for this condition in other ways.

From the instructional standpoint, the prime task of the professional school is to equip the student with what we have called in the past a knowledge of his subjects. But this should be a quite different type of instruction and study than institutions of general education represent. It should in all of its phases be shot through and through with the professional purpose. This means that in connection with practically every topic studied, its history, its significance to human progress, and the problem of adapting it to the comprehension of the learning mind and of different types of learning minds should be considered. Far from being narrow and circumscribed, the treatment should be far broader and far more comprehensive than that which instruction for so-called general purposes involves. Viewed in this light, the materials of elemental or fundamental education may be made as liberalizing in their influence as the so-called higher or liberal studies. The latter, in themselves, will not be neglected, but they will be selected and taught with especial reference to the light that they throw either upon the more elemental materials, or upon the broader problems that the teacher must participate in solving as a member of a profession charged with the framing of constructive policies in its own field.

Along with this broad and comprehensive study of subject-matter should go, I believe, a series of very carefully graded and supervised contacts with the work of the lower schools. This phase of the work should be more than mere observation; from the outset it should involve actual responsibilities for some type of actual service with children and under the direction of master teachers of children. It should culminate in a period of responsible teaching under fairly normal classroom conditions. The urban teachers' colleges have a very distinct advantage over other professional schools in the facilities that they can command for this close and constant correlation of theory and practice.

As to "theory of education" itself, I am personally of the opinion that, while it should not be minimized in importance it should be so organized in the beginning as to explain and rationalize successful practice rather than to lay down a set of dicta or dogmas from which, it is assumed, effective precepts of practice can be derived *a priori*. I should try to furnish the student at the outset with a bird's eye view of the field of education, dealing chiefly with facts, but also presenting as concretely as possible the outstanding variations of opinion regarding disputed questions of theory. My aim would be to lead the student gradually to accumulate his facts and questions, dispose of them specifically and provisionally as he goes on, and come finally toward the close of his pre-service education to a fundamental and thoroughgoing study of educational principles. I believe that if we proceed in the opposite way, starting with recondite theory and finally reaching practice, we are almost certain to indoctrinate the student with regard to complicated problems about which no one can afford to be "cocksure," and what is far worse give him at the outset the conviction that there is just one way of practicing his art and thus permanently seal his mind against other ways which may be as good or better.

With regard to the scientific study of his problems I should certainly utilize every tested principle that the science of education has developed. This would be done all along the line, and with the rapid development of educational science, these tested principles will come to form an important point of his curriculum. I should still aim, however, to keep the science of education the handmaiden of the art of teaching. I should especially safeguard the best interests of the cause of education by training every teacher to distinguish clearly between fact and hypothesis, a distinction always important in scientific inquiry, but especially fundamental in the field of educational science. The method that educational science has developed and used is predominantly the statistical method, which is peculiarly likely to result in artifacts as well as in actual facts.

It is clear that a program of this sort can not be made maximally effective unless the time devoted to pre-service education is extended. The urban professional schools are in a position to initiate this extension. Steps have already been taken in many cities to provide through extramural or in-service courses for the further education of teachers. This is one of the most important movements in the whole field of education, for it expresses, I am sure, a quite new standard of professional service—the ideal, namely, that the teacher must always be a learner. It would, however, in my opinion, be a very serious mistake to think of in-service education as a substitute for extended pre-service education. It should rather be looked upon as a complement to pre-service education. It will accomplish its best results when it works upon the most thorough basis that pre-service education can provide. In-service education, indeed, should be regarded as a continuous process, the aim of which is to keep the teacher growing in his work as long as he remains a teacher. To think of it merely as a means of making up the deficiencies of pre-service education is, to my mind, to blind one's self to its real significance and its richest promise.

THE LEGAL STATUS OF THE SCHOOL SUPERINTENDENT[1]

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Has the superintendent of schools any legal status? This is a question of vital importance both to the professionally trained superintendent and to the lay public.

Approximately one-third of the total municipal expenditure in American cities and villages goes to the public schools. In progressive cities the proportion is much higher often exceeding 40 or 50 per cent. On whose initiative is this considerable expenditure made? Whose thinking decides what shall be done with one-third or more of the city's budget? Who is morally responsible for seeing that every dollar brings the greatest possible return to the community for which it is invested? The American public is interested financially in the answer to these questions and has a greater interest in the return from the investment.

What are the responsibilities of the city superintendent of schools? Does he have the same responsibility in the eyes of the law that he has in the eyes of the public opinion? Does public opinion hold the superintendent responsible for the performance of functions for which other parties are legally responsible?

There are indications today that the American public is not satisfied with the legal machinery devised for the administration of city schools. For evidence we need but look to the conflict over financial matters between boards of education and city councils or to the uncertain tenure of city school superintendents.

Nearly every legislative session in every state is called upon to consider new laws for the local administration of schools. Every such law directly or indirectly affects the legal status of the school superintendent. What political concepts underlie such legislation?

An examination of the law and of the current opinion of our day shows two distinct theories of the legal status of the school superintendent. One theory holds the superintendent legally as an employee of the board of education with only such powers and duties as are generally or specifically delegated to him by the board. This theory is written into most of the school law and is current in a considerable body of public opinion. It fits easily into the political conception of the full control of educational affairs by the local community; and it finds staunch support amongst those who advocate a semipolitical business administration of schools. In late years the theory has been somewhat revised. "It looks upon the school district as a corporation, the public as stock holders, the board of education as board of directors and the superintendent as chief executive or general manager." In this form the theory has contributed much to school administration.

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[1] Address delivered at Schoolmen's Week, Yale University, New Haven, Conn., July 11, 1922.

For more detailed discussion of subject see, Morrison: "The Legal Status of the City School Superintendent," Warwick & York, Baltimore, Md.

The second theory looks upon the superintendent as a state official assigned to the administration of schools within a specified subdivision of the state. His duties are usually specified by law or by rules prepared by a centralized state educational authority. His appointment and tenure are usually controlled by the same centralized body. Notable illustrations of the application of this theory are: The district superintendent of New York State, the city superintendent of Virginia and the supervisory school agent of Connecticut.

Both theories, evidently, had their origin in the European backgrounds of our political structure. The first came through the influence of the New England town meeting; the other had its beginning in such political educational structures as that created by the Napoleonic code. Connecticut gives a fair illustration of the influence of the two ideals on the development of school legislation.

In 1650 the General Court of the Colony of Connecticut enacted a "Body of Laws." Among the provisions for education was the following: "For as much as the good education of children is of singular behoof and benefit to any commonwealth and whereas many parents and masters are too indulgent and negligent of their duty in that kind: It is therefore ordered by this court and the authority thereof that the selectmen of every town in the several precincts and quarters where they dwell shall have a vigilant eye over their brethren and neighbors, to see: First, that none of them shall suffer so much barbarism in any of their families, as not to endeavor to teach, by themselves or others, their children and apprentices so much learning as may enable them perfectly to read the English tongue and knowledge of the capital laws."

In the first attempt at educational legislation in Connecticut the law making body assumed its authority over the education of the children and apprentices of the commonwealth. It also assumed authority for placing responsibility for teaching on the parents and masters and responsibility for supervision on the town selectmen in the several precencts and querters.

Evidently the selectmen did not secure the desired results for in 1690 the same court passed another law which relieved the selectmen from their responsibility for supervision of education and placed it on the grand jurymen of the several towns. The law specified the number of visits per year the grand jurymen should make and the penalties that should be inflicted for neglect on the part of parents and masters.

About the same year the same court provided for the establishment of two good free schools; one in New Haven and the other in Hartford for the teaching of reading, writing, arithmetic, the Latin and English languages. It provided that the masters of these two schools should be chosen by the magistrates and ministers of the said counties, and should be inspected and displaced by them if they saw cause . . . In these two acts we see evidence of a people through their legally constituted representatives, providing for a general educational system for the state and laying at the same time a foundation for the development of the local city school system.

The records of the town of Hartford show that about 1765 a committee of three men was appointed to hire a school master, to take into their care all interests, moneys, and securities belonging to the school, and to manage, regulate and order the same. This committee was also authorized by the vote of the town to give certain instructions to the masters, and to take due care of the morals, as well as of the learning of the scholars . . . A year later this committee was increased to six and instructed to prepare a plan or method for improving the school and to submit this plan to the next meeting of the town. They made six recommendations. Four dealt with the business or financial interests of the districts; the fifth concerned the appointment of masters or teachers and the sixth the instruction and supervision of the schools.

In 1789 the committee was reorganized by adding the pastors of the several churches in Hartford. Here we have a beginning of the committee system of school board organization. Three committees were formed. One to take care of the financial affairs of the district, a second to digest a system of rules and regulations for the school and a third to examine candidates for admission and to examine the school monthly.

A few years later, about 1795, the schools were given over to the ecclesiastical groups known as School Societies. Each society appointed a board of school visitors who were to have full charge of administration and supervision of the school. Through this act the state experimented with an entirely different group of officers to secure local administration of schools. According to Mr. Barnard the work went well for some years but times changed. By 1835 there was general dissatisfaction throughout the state. Later Mr. Barnard wrote that the "results of the whole system were ascertained to be, that the mode of discharging the duties of inspection and superintendence, which is the very life of a school system, and determines in a great measure the character of the schools, was inefficient, irregular, and formal at best."

In 1839 an attempt was made to remedy the difficulties by more distinctly defining the powers and duties of school visitors.

In this legislation one of the most striking changes was the provision that allowed the board of school visitors to appoint a committee of one or two persons, to exercise all the powers and perform all the duties of the board, under their advice and direction. There was an additional clause which provided that such person or persons should receive $1.00 per day for the time actually employed.

The act of 1855 provided for a board of education to consist of 3, 6 or 9 persons and gave this board full power to appoint an acting school visitor in said district. Thus, after nearly 20 years the committee of one or two members was legally crystalized into one official who had all the powers and duties of the former Board of Visitors.

The acting school visitor remained a central figure in Connecticut school legislation for the next 50 years. Not until 1875 was the word "superintendent" finally written into the Connecticut school law to remain there and boards of education legally permitted to elect one not of their own number as superintendent or acting school visitor. Even as late as 1904 school boards had the privilege of making their secretary the acting school visitor. In 1903 the office of "superintendent" of schools was recognized in the Connecticut law as something not synonymous with the term "acting school visitor." The persistence of the old concept held over, however, in that the superintendent's duties "shall always include the duties of acting visitor as now prescribed by law."

In developing the supervisory school agent since 1900 Connecticut has made an interesting contribution to the theory that the superintendent is an officer of the state responsible for administration within certain limited subdivisions of the state. Here, as in many other states of the Union, the people, through their legally elected representatives are entrusting their centralized educational authority with large responsibility for the local administration of schools. In these brief allusions to the historical development of the superintendent's office in Connecticut two points are outstanding. First, underlying all of the legislation within this commonwealth education has been considered a responsibility of the state. Second, the people who constitute the state have tried one group of officials after another and one type of organization after another in an effort to find the organization and officials who could best administer education in the several localities of the state. Another feature scarcely less evident is that old concepts once written into the law hold over from generation to generation. No better illustration can be found than the influence of the concept of the acting school visitor in Connecticut legislation from 1795 to 1922.

The story of the development of school legislation in Connecticut has its parallel in almost every state of the Union. In most of the states we find principles of modern day government operating as best they can through an administrative organization that has long outlived its usefulness.

With very few exceptions schools in cities and villages throughout the United States are administered by a board of education and a superintendent elected or appointed by the board. The superintendent is responsible to the board for all instructional affairs and is nominally but not actually responsible for the administration of the material affairs of the school plant.

The laws of the 48 states show five types of relationship between the superintendent and his board of education. In one relationship the superintendent has no power or responsibility whatsoever within the law except as it is delegated to him by the board. A second relationship explicitly provides that the superintendent shall be responsible for advising the board of education. This in the law may take either of two forms. The law may give him a seat in the board with a right to speak on all questions and responsibility for advising the board on all questions pertaining to the schools; or the law may specify certain functions concerning which the superintendent shall advise the board. A third relationship that is finding expression in much recent legislation places responsibility for taking the initiative in certain administrative duties solely within the superintendent's office. In such cases it seems to be the intent of the law makers to make it legally impossible for the board to take action on such matters until the superintendent has taken the initiatory step. A striking illustration is in the appointment of teachers The law intends that no teacher shall be appointed by the board who has not first been recommended to the board for appointment by the superintendent. A fourth relationship places the power or responsibility directly in the office of superintendent and gives the board of education no voice whatsoever in the matter. Such legislation sometimes provides a penalty for non-observance of duty. One of the earliest examples was in the 80's when the legislature of Ohio provided a penalty for superintendents of schools who failed to promote the teaching of prohibition. Another striking illustration of how law makers of the future may look upon school superintendents was contained in the recent legislation of Nebraska during the World War period which provided that "The city superintendent of the city where any private, denominational or parochial school is located, shall inspect such school and report to the proper officers any evidence of the use of any textbooks or of any activities, instruction or propaganda therein subversive of American institutions and republican form of government or good citizenship or of failure to observe any of the provisions of this act." A more common illustration of this relationship is a provision in many of the state laws that the superintendent of schools or some officer designated by him shall be responsible for granting working certificates. There is a relationship found in the statutes of the states of the central and southwest and to some extent here in New England which gives the superintendent a veto power over the local board. This relationship seems to be a direct lineal off-spring of the influence of the Napoleonic code.

Study of recent legislation shows a growing recognition among legislators of the legal responsibility of school superintendents. Authority to excuse children from the requirements of the compulsory attendance law, to grant working papers, and to decide when home instruction is satisfactory, are, in the majority of states, vested either altogether in the superintendent or in the superintendent subject to the board's approval. The 1919 code of Delaware made the superintendent responsible for preparing the school budget, such budget to be subject to the approval of the board of education. The laws in many states require that the superintendent advise the board of education as to repairs, rent, insurance purchase, sales, plans for new construction and in the supervision of construction. The Delaware code held the superintendent responsible for taking the initiative in the preparation of building plans and in the securing of new school properties: Such initiative was subject to the approval of the board of education and of the centralized state authority.

In the state of Washington the city superintendent is required by law to prepare and issue "a course of study for his schools, which course of study must before going into effect, be approved by the state superintendent of public instruction." The intent of the law is that the superintendent shall work under the general control of the board of education but subject to the approval of the central state authority.

Recent legislation also shows that appointment of school employees concerned largely with the material affairs of the school is being placed under the direction of a professional executive. The Delaware code was the most advanced in this matter and required that "a superintendent of schools shall nominate in writing to the board of education, janitors, and all regular employees of the board, shall assign to them their positions, transfer them as the needs of the school require, suspend them for cause, and recommend them for promotion or dismissal."

One of the earliest duties of the school superintendent was the preparation of reports both to the board and the central state authority. This becomes a very important duty in view of the increasing use of school reports as a means of publicity.

One of the best illustrations we have of an outworn legal machinery is in provisions for supervision. In many of the states where school laws written some years ago still prevail responsibility for supervision of the schools and even of instruction is vested specifically with the board of education. The Mississippi law requires that the school trustees visit every school in their district at least once in each month, and examine carefully into its management, condition and wants. Wyoming is less exacting in that the monthly visitation shall be done by a committee appointed by the board from their own number. It further provides that the board may appoint such persons as they may desire to visit schools with them at least twice a year and observe the discipline, mode of teaching, progress of pupils, and see that the teachers keep a correct register of the pupils. Montana is less exacting and requires trustees to visit each school once each term.

Another striking illustration of a law that was written before the existence of the professionally trained superintendent is seen in the Iowa code. The law provides that the board of education may to the end that they may be fully advised consult with the city superintendent or other competent person, with reference to the selection of textbooks. On the other hand Pennsylvania recognizes the value of the professionally trained expert when it provides that the superintendent shall after consultation with his teachers report in which subjects new textbooks are needed, and that his recommendation shall then be adopted by the board unless overuled by a two-thirds majority.

In almost every state that allows local executives to examine and certificate teachers, responsibility is vested in the superintendent's office or in a committee of which he is a member. There is a growing tendency however, to consider examination and certification of teachers strictly a function of the state. Kansas has already passed a law providing that after a certain date local certificates will be valid only in elementary schools.

On the question of transfer of teachers the law is usually silent. However, in the law of Virginia, "The division superintendent in cities shall have exclusive authority to assign to their respective positions all teachers and principals employed by the school board and to re-assign them at his discretion; provided, that no change shall affect the salary of any teacher." Oregon perhaps best illustrates the most advanced legislation concerning the superintendent's responsibility in the dismissal of teachers. Charges made against any teacher on the permanent list must be submitted to the superintendent in writing. He may make formal written charges to the board either upon his own account or written complaints filed by others. Only, after such complaints have been filed with him for a reasonable length of time does the law provide that they can be given over directly to the board.

Only 4 of the 48 states provide for a business manager who shall be largely independent of the superintendent and in these 4 states appointment of such business manager is permissible, not required.

The legal status of the superintendent today is perhaps best expressed by the laws of Iowa and Idaho. The first says, "The board of directors shall have the right to employ a superintendent of schools . . . who shall . . . have such powers and duties as they may prescribe, with such duties and powers as are now or may hereafter be prescribed by the laws of the state." "The (Idaho) board is empowered to employ a superintendent of schools, who shall be the executive officer of the board, with such powers and duties as are now or may hereafter be prescribed by the laws of the state." These two legislative enactments express a definite recognition of the school superintendent as an officer of the state responsible directly to the state for the performance of such duties as are prescribed. They give expression to a political concept that in no way recognizes the school superintendent as merely an employee of a board of education. The enactment of such a political concept into law requires that we take thought concerning what duties may hereafter be prescribed.

The foregoing brief review of recent school legislation shows three out-standing features. First, a superintendent of schools shall have such duties as are or may be prescribed by law. Second, the superintendent is rapidly being legally recognized as the chief advisor of the board of education. Third, in addition to certain powers and duties to be exercised independently of the local board, the superintendent is being vested with the responsibility for taking official initiatory action in the execution of a great many administrative duties. If the laws are to prescribe certain duties for the superintendent of schools, who shall determine what specific duties are to be prescribed? True, the legislative body will make final decision but someone will create and mold the public opinion that will influence law makers in their enactments.

Some months ago I had opportunity to ask 100 of the leading school superintendents, representing nearly every state in the Union, what, in their opinion, should be the legal responsibility of the city school superintendent. I likewise asked the same question of 100 prominent members of city boards of education scattered throughout the United States. The two groups were in fairly close agreement as to the initiatory responsibility that should be vested in the superintendent's office for the administration of all instructional functions.

More than 50 per cent of the board members and more than 90 per cent of the superintendents agreed that the superintendent should be legally responsible for taking the initial step in: The appointment of assistant superintendents, supervisors, teachers and clerks, attendance officers, health, recreational and social workers and in the transfer and dismissal of these same groups; the enforcement of compulsory attendance laws; the determination of subjects and content of subjects in the curriculum; making rules and regulations governing routine matters and new policies; the selection of textbooks instructional and other supplies; and in the supervision of medical instruction, classroom instruction, civic center activities and continuation schools. There was marked disagreement of opinion or a great deal of uncertainty and hesitation in the judgment of both groups as to who should have initial responsibility for: The appointment of business manager, secretary to the board and janitors; the purchase and sale of buildings and grounds, preparation of building plans, supervision of construction, rent and making of repairs. In preparation of the budget 80 per cent of the superintendents thought that the superintendent should take the first initial step. About 40 per cent of the board members agreed with them.

Without question, the greatest forward step in legislation for the local administration of schools lies in making the superintendent legally responsible for taking the initial step in all administrative acts. It naturally follows that the superintendent's proposals should be subject to the approval of the board before they are put into execution. Responsibility for the execution of the act will be a much more difficult point to establish. Three or four examples illustrate the problem involved.

In 1795, when professionally trained superintendents were not yet dreamed of, it was perfectly appropriate for the legislature to hold the board of school visitors responsible for visiting the schools at stated intervals. Today, it is not logical for a state to hold the board of education responsible for the actual supervision of schools. The Connecticut law holds the superintendent responsible for nominating teachers, and the board responsible for approving his nominations. In the old days the correspondence and interviews were between teacher and board. Today, the actual execution of the act, *i.e.* the interviews and correspondence, are between superintendent and teacher. The same reasoning applies to the making of the budget, to the supervision of construction of new school buildings and to practically every other administrative act.

It is a safe prediction that the school superintendent will more and more be recognized as actually the executive head of the local school system. He will be held responsible for taking the initiative in all administrative functions, and when his proposals have been approved by the board, for putting them into effect, for executing them. How then, shall the duties and responsibilities of the superintendent of schools be coordinated with the duties and responsibilities of the board of education so that chances for friction may be eliminated and the public may receive a maximum efficiency of service?

The legal relationships of the board and superintendent will depend on the legislative solution of many relationships. Among the more important are: The type of the centralized state authority, the relationship of local school officials to other municipal, country or town authorities; the responsibility of school officials to the public they serve; and last but not least, the legal relationships of the board and superintendent to those who work with them.

Every state needs a revision of its school law that will make it possible for public school officials to give their best service. But most of all there is need for public thought to be lead from the old thought channels into a newer vision of what needs to be and can be done for the public schools.

In America the state is responsible for the education of its people. The laws of the state determine in a large measure the responsibility for school administration in local communities. Elimination of dual authority and a more careful definition of the powers of all officials concerned with the local schools will do much to lessen friction that now exists and to increase efficiency of the public school service. Much of the school legislation that we have at present grew out of conditions that existed when legislators were designing measures to promote education in the one-room log school building and to meet the exigencies of ward politics. We face a day when the schools can in no sense be a source of patronage to local politics and when consolidation and larger supervisory units are taking the place of the one-room school. The public is no longer satisfied with a school superintendent who is merely the chief employee of a board of education. It wants a man or woman fitted by education and experience to take active leadership in all of the ever increasing activities and responsibility of local school administration. Superintendents and the boards of education with whom they are associated have it in their power to formulate such a program as will insure the greatest efficiency in school administration. When such a program is formulated it should be given the prestige and protection of the law.

THE AGE-GRADE STATUS AS AN INDEX OF SCHOOL ACHIEVEMENT

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The early investigators of the problem of retardation used age-grade status as the sole standard by which to judge of the degree of retardation or acceleration of a pupil in his school career. The work of Thorndike, Ayres, Strayer, Bachman and numerous other investigators has yielded sufficient data to prove that the grade level attained by a pupil of a given age is at least a crude index of that pupil's success in school. The extensive use recently of various mental and educational tests tends to show that age-grade status can be nothing more than a crude measure of educational progress. Furthermore, after two decades of investigation of the problems of retardation from the age-grade point of view, the proportion of retarded pupils in most school systems remains practically undiminished. There has been nothing in the age-grade measure of retardation suggestive of remedial treatment. Such a measure is too crude and too general to possess diagnostic value.

Recent tests of mental ability and educational achievement tend to show that the older pupils of a given grade are not necessarily the most capable. Nor are they the most proficient in their school subjects not-with-standing they have had more years of schooling than those of normal age or than those who are young for their grades. A pupil's presence in the classroom for one year is no guarantee that he has attained a year's mental growth nor that he has made a year's progress in his reading or arithmetic achievements.

The wide variation in ages for any given grade is also indicative of the inadequacy of age-grade placement as an index of school success. Table I shows the age distribution by grades for one city school which is typical of the wide distribution of ages.

Here the range of ages is from four years (6–9) in grade I, up to seven years in grade III (7–13) and in grade VII (11–17). If a year of living or a year of school experience is the prime requisite for successful schooling why does one find so wide a range as seven years in the ages of pupils of the same grade? In Table I, there are 12-year old pupils in every grade from third to eighth. Apparently age tells one very little as to the grade in which a pupil is to be found. Nor is there

TABLE I

Ages	Grades							
	1	2	3	4	5	6	7	8
6	10	44						
7	10	11	1					
8	12	7	9	2				
9	7	5	16	12	1			
10	..	1	5	12	9	1		
11	..	..	2	10	13	10	1	
12	..	..	1	2	4	12	7	1
13	..	..	1	1	6	8	14	7
14	..	..	..	..	1	4	3	11
15	..	..	..	..	..	1	3	7
16	..	..	..	..	..	..	2	2
17	..	..	..	..	..	..	2	2
Total................	39	28	31	40	34	36	32	30

7 + 25
32

any indication from the figures in Table I, as to whether all or any of the pupils are doing satisfactory work. Moreover such a table offers no information as to why the 7-year-old is placed in the same third grade with the 13-year old. A tabulation of the ages and grades of the children of any city or town shows practically the same distribution as that of Table I, and indicates as little of the true educational and mental status of the pupils as does that of Table I.

TABLE II

			PER CENT
4 years older than normal..................	22		
3 years older than normal..................	114	1024	38
2 years older than normal..................	289		
1 year older than normal..................	599		
Normal..................................	913	913	34
1 year younger than normal..............	664		
2 years younger than normal..............	84	752	28
3 years younger than normal..............	4		
Total..................................	2689		

The ages usually assumed as normal for a given grade are six or seven for Grade I, seven or eight for Grade II, eight or nine for Grade III, etc. According to this standard a pupil 6 years old in Grade II is 1 year younger than normal for his grade, a pupil 10 years old in grade

II is 2 years older than normal for his grade, and so on with each grade. Table II shows the distribution of 2689 pupils in six Idaho schools as to whether they are normal, old, or young for their grades.

The most significant feature of the above distribution is that the sum of the number of pupils young for their grades and those old for their grades is almost twice as large as the number who are of the proper age for their grades. This means that if age were used as the only basis for determining grade placement two-thirds of the pupils would be misplaced by as much as from 1 to 4 years. It is apparent from this table that age-grade status is not an adequate index of proper placement of pupils.

It is sometimes assumed, however, that in a given grade on account of the older pupils' greater number of years of schooling and, presumably, greater maturity, that their school achievement will be of a higher quality, and conversely, that the younger pupils of that grade,

TABLE III

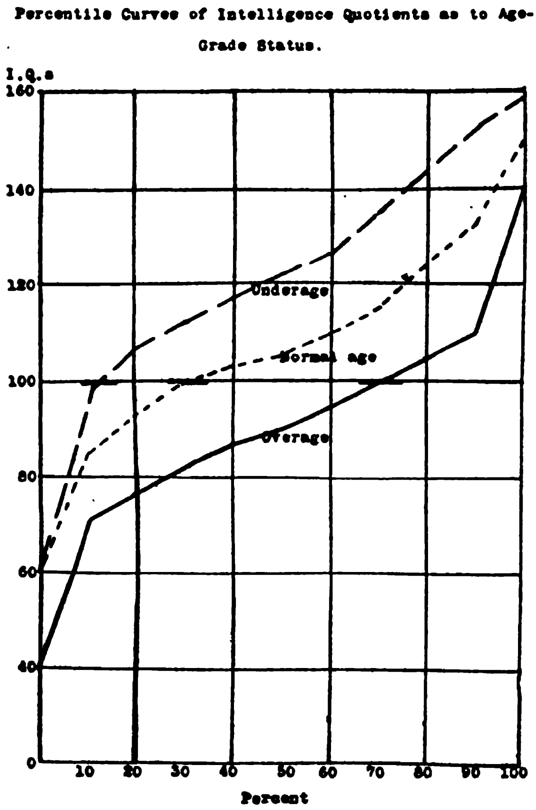
Reading rate scores	Grades																	
	3			4			5			6			7			8		
	Y[1]	N[2]	O[3]	Y	N	O	Y	N	O	Y	N	O	Y	N	O	Y	N	O
0– 9	4	2	1															
10– 19	2	1	4	...	...	1	...	...	...	1	...	3	...	...	1			
20– 29	6	4	5	...	...	4	...	...	1	0	1	0	...	...	1			
30– 39	7	11	7	10	8	17	4	2	8	1	0	5	1	...	1	1	...	2
40– 49	13	8	12	16	21	17	4	7	8	2	1	6	1	6	13	0	...	5
50– 59	7	7	7	19	25	16	14	16	25	9	17	15	3	10	12	4	5	9
60– 69	5	12	1	20	21	10	14	25	15	17	21	22	12	22	33	5	21	21
70– 79	3	5	1	15	12	8	13	19	17	0	0	0	0	0	0	0	0	0
80– 89	1	3	0	16	19	14	10	24	16	23	33	26	21	27	51	17	21	41
90– 99	0	4	0	5	9	4	19	14	15	12	17	11	25	36	39	16	21	24
160–109	0	..	0	8	1	2	11	9	9	15	16	9	10	23	29	10	25	22
110–119	1	..	1	7	5	1	7	9	4	25	16	16	22	32	19	13	20	21
120–129	0	..	..	0	3	...	10	6	7	0	0	0	0	0	0	0	0	0
130–139	0	..	..	0	0	...	0	0	0	6	6	4	17	19	13	19	15	15
140–...	1	..	..	2	2	...	20	15	9	22	11	12	31	39	33	50	47	21
	50	57	39	118	126	94	126	146	134	133	139	129	143	214	250	135	175	181
Medians:																		
Young	45	..	...	67	...	...	93	...	...	101	...	...	109	...	...	131		
Normal	..	54	...	...	65	...	...	82	...	...	89	...	...	103	...	...	106	
Old	..	..	43	...	...	53	...	...	76	...	...	85	...	...	92	...	...	95
Range of middle 50 per	31	37	30	52	50	40	64	65	57	81	68	61	88	86	68	94	88	82
cent	59	69	51	85	85	76	117	103	97	118	109	109	133	133	112	143	140	115

[1] Y—Young.

[2] N—Normal.

[3] O—Old.

on account of their immaturity and shorter period of schooling will show a correspondingly low degree of school achievement. Let us see whether this commonly accepted assumption is supported by the data presented herewith.



Percentile Curves of Intelligence Quotients as to Age-Grade Status.

FIG. 1.

Using the results of the Monroe Silent Reading Test, Form 1, as a measure of achievement in silent reading in both rate and comprehension, we have the distributions of Tables III and IV.[1] Table III

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[1] The data for this investigation were collected and tabulated by the Department of Tests and Measurements, State Normal School, Lewiston, Idaho.

TABLE IV.—READING COMPREHENSION

	3			4			5			6			7			8		
	Y[1]	N[2]	O[3]	Y	N	O	Y	N	O	Y	N	O	Y	N	O	Y	N	O
0– 2	8	8	20	2	3	8	....	2	3	....	....	1	....	....	2			
3– 5	15	15	13	15	14	24	8	2	12	1	4	6	1	1	2	....	1	2
6– 8	13	11	9	17	35	17	11	11	17	3	4	13	4	4	13	1	1	6
9–11	4	11	4	30	27	15	14	16	17	7	17	13	3	15	20	1	5	9
12–14	3	6	0	19	17	10	16	33	23	19	14	22	6	20	38	5	11	18
15–17	3	4	1	12	9	7	7	23	20	14	26	19	11	21	35	6	17	23
18–20	...	3	1	12	12	9	20	22	16	14	21	13	17	25	34	11	24	30
21–23	1	....	....	6	3	4	17	6	14	13	11	11	17	36	30	18	23	32
24–26	1	....	....	3	2	....	11	8	2	16	16	11	13	15	14	12	18	14
27–29	...	....	....	3	3	....	8	11	5	10	12	7	16	13	21	10	13	16
30–32	...	....	....	....	1	....	13	7	4	11	4	8	15	19	8	14	17	6
33–35	...	....	....	....	1	....	2	2	5	11	4	1	16	17	7	18	13	11
36–38	...	....	....	....	....	....	....	....	....	6	5	3	10	11	8	14	6	4
39–41	...	....	....	....	....	....	....	....	....	4	2	....	6	4	5	8	11	4
42–44	...	....	....	....	....	....	....	....	1	2	1	....	6	8	4	15	8	6
45–..	...	....	....	....	....	....	....	....	....	....	....	....	....	2	1	3	7	
Total	48	58	48	119	127	94	127	143	139	131	141	128	142	211	242	136	175	181
Medians—																		
Young	6.2			11.6		19.2			22.8				26.9			31.9		
Normal		7.9			10.9		16.0			18.9				22.2			25.0	
Old			3.9			8.6		14.7				16.4			19.0			21.8
Range of middle 50 per cent	3.8	4.2	1.8	8.3	7.3	4.0	11.9	12.5	9.5	15.6	14.1	11.8	19.7	16.8	13.8	22.7	19.1	16.3
	9.0	11.5	7.0	16.0	15.0	13.8	24.5	19.0	20.4	30.5	25.0	23.5	33.0	31.2	25.7	37.3	33.4	27.2

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[1] Y—Young.
[2] N—Normal.
[3] O—Old

shows the rates of silent reading for those who were young for their grades, of normal age for their grades, and old for their grades.

The medians for the under-age group in each grade are in every case higher than those for the over-age group. Not-with-standing the fact that as a group, the younger pupils of a grade have had from 1 to 7 years less schooling than the older pupils of the same grade, they, nevertheless have learned to read at a more rapid rate. The differences in the medians of the three groups are shown graphically in Fig. 1.

A similar tendency prevails in the data for comprehension of silent reading (Table IV).

Perhaps the differences between the age-groups are more significant for comprehension of silent reading than they are for rate since comprehension is the better measure of school achievement.

In Fig. 1 the median curve diverges more widely in the upper grades than in the lower grades indicating a general tendency towards increased superiority of the under-age over the over-age as training continues. This increased divergence between the young for their grades and the old for their grades is significant as evidence against the proposition that training tends towards uniformity of achievement. It also suggests the inadequacy of age as an index of reading achievement.

Achievement in reading is one of the most important of all the school achievements. Reading is also one of the school subjects receiving the largest proportion of school time and attention. If one assumes that the over-age pupils have been subjected to from 2 to 4 years more training in reading than the pupil of normal age, and to from 2 to 7 years more training than the pupils who are young for their grades, it might reasonably be expected that the over-age pupils would show a much higher degree of achievement in reading than do the pupils who are normal or young for their grades. But this is not the case. Exactly the reverse is true. Those who are young for their grades show the highest degree of achievement, those who are of normal age for their grades show the next highest degree of achievement, and those who are over-age show the lowest degree of achievement, notwithstanding their greater number of years of schooling. Such a situation indicates either ineffectiveness in the teaching of the over-age to read, or the inability of these pupils to profit by their training in reading. That the latter situation is the more likely explanation of the low achievement of the over-age pupils is supported by the data presented in the following tables.

The Otis Intelligence Examination was given to 892 of the pupils represented in Tables II and III and the Haggerty Intelligence Examination, Delta 2, was given to the 1797 remaining pupils. Using the Otis Mental-Age measure for the former group and the Haggerty Age-Ability (Mental Age) measure for the latter, group, intelligence quotients were computed for each individual by the usual formula $\left(\frac{\text{MA.}}{\text{CA.}} = \text{IQ}\right)$. It is not our purpose here to discuss the merits or weaknesses of such tests of ability, nor to point out relationships between reading achievement and scores made on either of the group tests used, although undoubtedly there is much to be said upon each of these topics.

Table V gives the distribution of pupils according to intelligence quotients (Otis Test) and according to the number of years over-age or under-age. Table VI shows the same for the pupils tested by the Haggerty Tests. Table VII shows the distributions for both groups combined. The coefficients of correlation were computed by the Pearson method.

TABLE V.—OTIS TEST ($r = +0.548$)

IQ	Old				Normal Age	Young			Total
	4 years	3 years	2 years	1 year		1 year	2 years	3 years	
40	1	...	...	...	...	...	...	...	1
50	1	4	4	2	...	...	...	...	11
60	1	10	9	11	9	1	...	...	41
70	..	12	24	30	17	8	...	...	91
80	..	11	26	61	42	12	...	...	152
90	..	4	31	51	68	21	1	...	176
100	..	..	9	31	72	41	3	...	156
110	..	..	9	8	37	32	5	...	91
120	..	..	...	21	30	18	7	1	77
130	..	..	...	3	33	25	2	0	63
140	..	..	...	...	7	7	4	0	18
150	..	..	...	...	3	6	4	1	14
160	..	..	...	...	...	...	...	1	1
Total.........	3	41	112	218	318	171	26	3	892
Median IQ....	50	76	84	91	103	111	126	150	

TABLE VI.—HAGGERTY TEST ($r = +0.737$)

IQ	Old				Normal Age	Young			Total
	4 years	3 years	2 years	1 year		1 year	2 years	3 years	
50	4	5	...	...	...	...	...	...	9
60	4	14	19	4	1	...	...	...	42
70	7	25	36	44	8	2	...	...	122
80	4	18	46	78	56	17	...	...	219
90	..	4	45	65	69	10	...	...	193
100	..	7	30	155	203	68	3	...	466
110	..	..	1	23	105	111	6	...	246
120	..	..	...	12	88	127	12	...	239
130	..	..	...	...	46	79	8	...	133
140	..	..	...	...	19	53	12	...	84
150	..	..	...	...	...	21	9	...	30
160	..	..	...	...	...	5	8	1	14
Total.........	19	73	177	381	595	493	58	1	1797
Median IQ....	73	77	87	100	108	123	140	160	

TABLE VII.—HAGGERTY AND OTIS TESTS COMBINED ($r = + 0.63$)

IQ	Old				Normal Age	Young			Total
	4 years	3 years	2 years	1 year		1 year	2 years	3 years	
40	1	...	...	...	...	...	...	...	1
50	5	9	4	2	...	...	...	...	20
60	5	24	28	15	10	1	...	...	83
70	7	37	60	74	25	10	...	...	213
80	4	29	72	139	98	29	...	...	371
90	..	8	76	116	137	31	1	...	369
100	..	7	39	186	275	109	6	...	622
110	..	...	10	31	142	143	11	...	337
120	..	...	...	33	118	145	19	1	316
130	..	...	...	3	79	104	10	0	196
140	..	...	...	...	26	60	16	0	102
150	..	...	...	...	3	27	13	1	44
160	..	...	...	...	...	5	8	2	15
Total.........	22	114	289	599	913	664	84	4	2689
Median IQ....	70	77	87	96	107	121	135	160	

In all these tables the young for their grades show the higher IQ's, and the old for their grades, the lower IQ's. It is also apparent that the greater the over-ageness the lower the median of the IQ's, and the greater the under-ageness the higher the median IQ's. Figure 5 represents the medians graphically.

Table VIII represents all the over-age, all the normal-age and all the under-age pupils combined into three groups and distributed according to IQ's. The percentage figures are also given in this table.

TABLE VIII

IQ	Over-age 1 to 4 years		Normal age		Under-age 1 to 3 years		
	Cases	Per cent	Cases	Per cent	Cases	Per cent	
40	1	*	...	..	...	..	Very inferior
50	20	2	...	..	...	..	
60	72	7	10	1	1	*	
70	178	17	25	3	10	1	Inferior
80	244	24	98	11	29	4	
90	202	20	137	15	32	6	Normal
100	232	23	275	30	115	15	
110	41	4	142	15	154	20	Superior
120	33	3	118	13	165	22	
130	3	*	79	9	114	15	Very superior
140	....	..	26	3	76	10	
150	....	..	3	*	41	5	
160	....	..	...	..	15	2	
	1026		931		752		
Median IQ...	89		107		122		

* Less than 1 per cent.

The same general tendency for the under-age pupils to rank high and the over-age pupils to rank low in intelligence is indicated here. It should be noted, however that there are 7 per cent of the over-age pupils who have IQ's higher than normal intelligence (above 109) while there are 5 per cent of the under-age pupils who have IQ's below normal intelligence (below 90). The significant fact, however, is that 50 per cent of the over-age group are below normal intelligence while only 5 per cent of the under-age pupils fall below normal intelligence. Conversely only 7 per cent of the over-age group rank above normal while 74 per cent of the under-age group rank above normal intelligence.

There is also a difference in the median IQ's of the two extreme groups of 33 points the median for the over-age group falling at the upper end of the dull group and that of the under-age group falling towards the upper end of the bright group.

The foregoing evidence, such as it is, indicates that the pupils who are young for their grades are a distinctly superior group mentally to those who are old for their grades. This mental superiority undoubtedly accounts in a large measure for the distinctly superior achievement in reading of the under-age group over that of the over-age group.

It is likely that the over-age pupils can never be brought up to the same levels of achievement in the school subjects as is possible with the under-age pupils. At any rate, they have not been, even with from 2 to 7 years of additional training of the kind ordinarily given in the classroom. What may be done for these pupils in special classes, with individual attention, and under special methods of instruction, is now a matter of experiment.

The data used as a basis for the interpretations of this article, although not conclusive, tend to show that more accurate and definite information than that furnished by age-grade tables is needed if pupils are to be properly classified and placed in school. Class teaching rather than individual teaching will probably continue to be the prevailing mode of instruction for some time. If every pupil is to receive the maximum benefit from his schooling, and to achieve up to the limit of his ability, a more careful grouping of pupils will be necessary. A more definite and scientific basis than that of age or years in school will be required. These data show those pupils who are young for their grades, to be the retarded pupils rather than those who are over-age. The facts of this paper suggest that both groups would be better placed if grouped according to ability as shown by intelligence tests and according to school achievement as shown by educational tests.

The following conclusions seem to be justified by the data presented herewith:

1. The wide variation in ages of pupils of a given grade indicates the inadequacy of age as a basis for grade placement of pupils.

2. If the Ayres' Standard Ages for a given grade, *i.e.*, 6 or 7 for the first grade, 7 or 8 for the second, 8 or 9 for the third, etc., had been used for grade placement of pupils in the schools represented herewith, two-thirds of them would be misplaced.

3. The young pupils for their grades make higher median scores in both rate and comprehension of silent reading than do those pupils who are of normal age for their grades, or than those who are old for their grades. The over-age pupils make the lowest median scores, not-with-standing their longer training in reading.

4. The differences between the medians in both rate and comprehension of silent reading between the young for their grades and the old for their grades, are greater in the upper grades than in the lower grades. This is evidence that group differences increase with training.

5. As shown by the Otis and Haggerty tests, the mental status of the young for their grades is higher than that of those of normal age for their grades, and distinctly higher than that of the over-age group.

6. Mental ability as shown by intelligence tests and school achievement as shown by educational tests, seem more adequate bases for grouping pupils than do chronological age and years in school.

SOME RELATIONS OF EDUCATION AND DEMOCRACY

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The words *democracy* and *education* have many meanings. Instances are numberless of educative and democratic institutions, and every example has its own distinctive features. These individual cases, also, represent many varieties or species. There are political democracies, religious democracies, social democracies; industrial education, professional education, general education. But behind all of these individual instances, and back of all of these varieties and species, there stand the *genus* democracy and the *genus* education. This paper will be concerned with these generic terms.

Democracy, in this basic sense, may be defined in terms of opportunity. A democratic institution is an institution for insuring opportunity. But this word itself exacts description. Opportunity for whom, and for what? In brief, the aim of democracy is to insure to every man the opportunity to reach the full stature of his inherent powers through self-expression. This opportunity is extended to all, and is intended to make free and unrestricted, within limits now to be described, the right of each one to unfold through exercise his natural endowment.

This opportunity may not be entirely free, however. It must be *equable*, in the sense that every man must share with every other man the right to unfoldment and advancement. But this *equity*[1] of opportunity need not be regarded solely in the light of a restriction. In a truer sense it is a guarantee of freedom of opportunity to the individual. The recognition granted to the rights of others comes back to the grantor in the form of recognition by others of his own. There is no essential contradiction between equity and freedom, in their reference to individual opportunity.

Equity, moreover, does not mean "equality" in the sense that the opportunities of all must be the same. Men will always differ in natural prowess and in consequent position. By equity of opportunity is rather meant that to every man shall be given the privilege of expressing his own nature fully, in so far as such expression is compatible with the equal right of every one else to do the same.

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[1] For this term, and for other suggestions incorporated in this paper, the writer is indebted to Dr. A. B. Wolfe, Professor of Economics and Sociology in the University of Texas. Acknowledgement for suggestions is also made to Professor A. Caswell Ellis, of the School of Education in the same institution. The author's indebtedness to the writings of John Dewey will be apparent to all readers.

Democracy, then, is opportunity. It is opportunity for individual expression, with a view to unfoldment and achievement. It is opportunity which is at once equable and free.

But while democracy is opportunity, it is also something more. In the completest sense it includes, together with the recognition of individual rights, the assumption of social responsibilities. Alongside the right of every one to free and equable opportunity for expression must be placed the corresponding duty of participating to the limit of his powers in the society of which he is a member. Opportunity for expression may not be used merely for individual benefit, but must also be used for the advantage and advancement of that democracy of which all are parts. The right to self-expression thus merges into the duty of social participation; and both this right and this duty must enter equally into the conception of a responsible democracy.

Our next concern is with the meaning of education. Here, as has been suggested, there exist much variety and apparent contradiction. Space will not permit of the study of all of the possible definitions. But underneath the medley of meanings which have been attributed to this term there is becoming clearly discernible one fundamental motive. Like democracy, education is finding its generic meaning in the process of human development. From this viewpoint it may be defined as the conscious control of each individual's efforts at unfoldment; the conscious stimulation and direction of his efforts toward self-expression.

Three elements are involved in this description of education which warrant explicit statement. First, the object of education is the individual who is to be educated. Second, the purpose of education, with reference to its object, is a social purpose. Education seeks to make of the individual an effective factor in society. Third, education is a process of development or unfoldment. The educational process consists in properly stimulating individual growth in the direction of larger social efficiency.

The foregoing definitions give the clue to the most important relationship existing between education and democracy. They are related as two cooperating agencies in the furthering of one fundamental process. This process is the unfoldment, within a social environment, of the human personality. In the promotion of this process democracy serves to remove environmental obstacles lying in the way of that free self-expression which is necessary to individual unfoldment. Education, on the other hand, is the agency which seeks to select, organize, and present the necessary environmental stimuli. Democracy lays and clears the tracks, while education stokes and engineers the process.

In the relationship just described, education and democracy stand to each other, not as cause and effect, but as mutual causes of the same great consequence. Both are contributory to the process of human development. But while this relationship is primary, these agencies also exert interactionary influences upon each other. Each is a factor in the efficiency of the other. Each is necessary to the other's perfect functioning.

These interrelations may be summed up in the two time-worn phrases, "democracy in education" and "education for democracy." Yet, however familiar these phrases may be, their analysis now becomes our theme. Henceforth our problem will be to invest them with meanings which shall harmonize with the definitions already given of education and democracy, and with the fundamental relationship described as existing between these terms. In attacking this problem our method must be expository, and consequently more or less dogmatic. But the limitations of space preclude a more demonstrative method of approach.

Let us consider first, because they can be more briefly surveyed, the meaning and practical implications of "democracy in education." It is an accepted truism that democracy encourages the spread of education. Public education almost invariably accompanies the rise of democratic institutions. But there is another relationship, more ideal in character, which is not so uniformly evident. The essence of this relation is that, in a democracy especially, education itself should be democratic.

Democracy in education, like democracy everywhere, consists in freedom and equity of opportunity. In this case it is educational opportunity which must be equable and free. Democracy in education does not mean giving sway to the rights of parents or local communities to determine for themselves whether the educational opportunities to be extended to their children shall be good or poor. Communities or parents possess no such rights. Neither does it involve recognizing the rights of children to embrace or not the opportunities afforded them. Children are too inexperienced to exercise such a privilege wisely. The sane interpretation of the phrase would seem to be the one which has been given above; *i.e.*, the provision for every individual of a free and equable opportunity for education.

Freedom of educational opportunity is rather satisfactorily provided in the publicly supported school systems of our American states. But equity of opportunity is much less satisfactorily provided. In fact, there seems to be dispute as to what "equity," in this connection, means. It seems often to be confused with "sameness," as if signifying an identity of educational opportunity, both in kind and in degree. This, however, is clearly an impossible conception, and one which is inconsistent with the accepted connotation of the term. This meaning is permissible only if children are alike by nature and if their energies are directed toward similar goals. But such an assumption is opposed to fact. Equity of educational opportunity must mean variety of educational provisions, because the needs and abilities of children differ, and because their goals in life are different. It means such variety of opportunity as is provided in a rich and well-constructed course of study in the school.

Not always, however, does variety of opportunity mean equity. There is conspicuously evident in our country today a type of variation which is deplorably undemocratic, because it leads to radically unequal educational advantages. We have reference to the almost phenomenal differences in educational resources presented by different communities and even by different states. The restricted educational offerings of typical rural and village communities as compared with the larger offerings to children in the cities, and the poverty of opportunity afforded by certain Southern states as contrasted with the richness afforded by other states in the North and West, exemplify a kind of variation in opportunity which does not mean democracy.

The inferiority of country to city schools is recognized by nearly every one. The shorter terms and the less efficient teachers and equipment of country schools have received much attention. But the variation shown between the states seems to be less appreciated. Yet surely no one will hold that education in this country is democratic so long as the mere accident of his being born in Mississippi brings to a child as his inheritance from the state educational opportunities which are greatly inferior to what he might have enjoyed had he been born, under a happier star, in California.

To this point we have been occupied chiefly in describing " mocracy in education." We have defined it as freedom and equity of educational opportunity; wherein equity does not mean sameness, but rather the providing of opportunity or every one according to his abilities and needs. But it is totally inconsistent with any form of variation whereby some children, of more favored classes or in more favored places, are better provided for than are children who belong to other classes or who are reared in other places. Democracy in education involves both equality and variety of educational provisions; equality as between communities of similar form and type,and variety in the offerings of each community in order to serve the needs of individual children.

Besides universalizing education and introducing equity and variety into its provisions, a consistent democracy brings about almost revolutionary changes in education's content and form. This it does through its insistence that education be made to serve its own (democracy's) interests. Here we are led directly into the second of the interrelationships which have been set up for analysis. We must now have to do with "education for democracy." The discussion which is to follow is an effort to answer this question: In what way or ways can democracy be perpetuated, and its progress furthered, through education?

In approaching this question it is necessary to distinguish between democracy in the abstract and in the concrete, or (and this is perhaps a better statement) between democracy as a phase of human nature and democracy as a phase of human culture. The distinction here sought can best be clarified by means of an analogy. Let us take, for example, language. Language, like democracy, presents both natural and cultural, both subjective and objective, aspects. On the subjective side there are the natural traits or instincts which prompt men to linguistic expression. On the objective or cultural side there are all of the many tongues and dialects which the race has evolved in the course of its long history. As a cultural institution, a language is one result of the inherent nature of man reacting upon his environment.

What has been said of language may be repeated with reference to democracy. It also has both its natural and cultural sides. On the cultural side, man's many languages are paralleled by a multiplicity of democratic institutions. On the natural side, his linguistic traits are paralleled by a natural impulsion toward democracy. Democracies do not arise by accident. Like languages, they result from the interaction of human nature and environment. Just what traits combine to form this democratic nature it is hard to say, but possibly that which predominates is man's craving for unimpeded self-expression. This view would agree with the definition given above of democracy as "freedom and equity of opportunity for self-expression." However, the exact psychology which underlies cultural democracy need not be made an issue at this moment. It is enough for our present purpose to indicate that democratic culture must rest upon an essential phase of human nature.

We have now to state the real reason for introducing the foregoing distinction. There is one outstanding difference between human nature and human culture which must be taken into account in any fundamental treatment of "education for democracy." Human nature, in its inherent form, seems not to change from one generation to another; but human culture does so change. Here again the analogy with language may be enlightening. Man's linguistic traits are presumably the same today as they were in the days of the Paleolithic savage. But the language culture of the race has grown from manual signs and gutteral sounds and picture-writing to the super-refinements of modern oral and written speech. Similarly, man's natural impulsion and equipment for democracy is perhaps as it was in the beginning, but with the flight of time his institutional expression of this democratic nature visibly increases and improves.

Now let us return to our problem. What part has education in democracy? Manifestly, as it is cultural and not natural democracy which progresses, education's part, if it has any, must have to do with this objective side.

Education's part in the advancement of cultural democracy is a most important one. It is the specialized instrument by means of which is transmitted all of the culture of the race. Every generation must build its own culture upon the foundations laid by its predecessors. Through education it becomes possessed of these foundations. As one phase of human culture, democratic institutions are passed along in this same way. By education each generation acquires those lessons in democracy which the past has taught its ancestors, takes over its inheritance of democratic institutions, and makes ready for its own contribution to a larger democratic life.

It is difficult to state just what part of the content of modern education is of greatest service in thus handing along the race's achievements in democracy. Nearly all subject-matter can be made to contribute to this end. But thought turns at once to the social sciences, including history and politics, as comprising the subjects through which the most direct transmission probably occurs. These subjects deal directly with the liberating forces and movements in human society. If this inference is correct, it constitutes a telling argument for introducing the social sciences into high school, and in an elementary form even into the common schools. All men must share in the upkeep as well as in the enjoyment of democratic institutions. They must protect their freedom and equity of opportunity for expression. They must learn to hold these privileges at their true value. To do this all should possess at least a rudimentary knowledge of the nature and history of these institutions. But if this knowledge is to become available for all it must be made a more important part of the schools' curriculum.

The intensive study of democracy, as of other parts of social science, will have to be reserved for pursuit elsewhere. Only the simpler aspects can be treated in the more elementary schools. But these simpler phases are today sufficient for the rank and file. It is the leaders, to be drawn from the small minority of most capable individuals, who must bear the burden of preserving our democratic institutions and of expanding and refining them. The proper education of these leaders is of the greatest importance, and is the supreme responsibility of our higher educational institutions.

The essence of our argument is that all schools, both high and low, should teach democracy. The range of instruction in this field is very broad, including a study of the nature of democracy, of its history in all of its varied forms, and of the various institutions in which it is crystallized at the present day. It embraces what mankind has done with and learned about democracy since history's dawn. But in one particular direction the school should "keep hands off." It is not the school's function to prescribe the forms which democracy shall take in the future. It is rather for the school to describe democracy as it exists and has existed, and to point out the lessons learned in its pursuit. But whenever a teacher becomes so enamored of a particular social form or theory that he seeks through his instruction to fix it upon coming generations, he ceases to be an educator and becomes an advocate. In this principle may possibly be found a solution for the problem of "academic freedom," at least insofar as it involves teachers of the social sciences.

The foregoing statement is not intended to imply that the advocate has no proper place in the evolution of social institutions. What is meant is merely that the function of the advocate is very different from that of the educator, and that the two cannot with safety be combined at the same time in the same person. Social, like biological, evolution proceeds from conflict and survival; the former from the conflict and survival of ideas. These conflicting ideas are personified in their respective advocates; so that the advocate is necessarily actuated by a bias and heat which must detract from his usefulness as an educator. It is conceivable that the same man might function as an educator at one time and as an advocate at another, but it is inconceivable that he could act efficiently in both capacities at the same moment.

From the discussion that has preceded we may gather one answer to the question of education's participation in democracy's progress. It contributes to this progress by helping to transmit democratic ideals and institutions from each generation to the next. It keeps humanity informed of the progress already made in establishing freedom and equity of opportunity. In this way it erects, over and over again, the foundation upon which each generation builds its own extensions and additions. Moreover, it supplies each new builder with rules and principles of procedure which have been learned by the race through long experience.

There is also a second answer to our question. Education functions in the progress of democracy in yet another way. This second contribution is made through its developmental effects upon individual men and women.

As has been suggested, there is nothing accidental about the rise of any phase of human culture. It is but the outward, often the material, embodiment of man's inherent nature. Man's nature operates to change his circumstances; the result is culture. That phase of culture which we call "democracy" arises in this way. It exists, at least in part, because the instinctive nature of mankind has called it into being. But the instinctive nature of the race is only the collective sum of the inherent traits of individuals. These traits of individual men and women can be improved through education until they reach a more productive stage in the individual educated than they possibly could reach unaided. Education, by training and encouraging certain specific traits, can make of every man a better democrat.

In outlining this particular service of education to democracy we must be governed by two generally accepted scientific limitations. On the one hand we must not be led into the entanglements of "formal discipline;" and on the other hand we must avoid the assumption that these effects of education are transmissible by biological inheritance. This last restriction may seem to nullify the usefulness of individual development as a factor in racial progress. But if those traits and instincts which comprise man's natural equipment for democracy can be raised to their maximum level in every individual, does it not follow that the cultural inheritance of democracy will be better used, and that larger additions will be made to it by each succeeding generation?

Within the restrictions set by these principles of the limited "transfer of training" and of the "non-transmission of acquired characters," we may formulate the second answer to our question. The gist of our first answer was that the school should teach a knowledge of democracy. The heart of this second answer is that it should provide for practice in democratic ways of living. In the first answer we have stressed the content side of education; here our emphasis will go upon the side of form or method.

The school, in its form of organization and in the conduct of its affairs, should make increasing provision for the exercise of two complementary sets of human traits. It should encourage the growth of self-expression and also of self-control. It should give increasing opportunity from grade to grade for the exercise of initiative by the pupils, and it should at the same time seek to develop respect and recognition for the rights of others. Upon the one hand it should strive to cultivate the virtues of independence, self-confidence, self-direction and self-respect; and upon the other hand it should encourage generosity, justice, tolerance and cooperation.

To accomplish these ends many schools will have to be reorganized upon more democratic lines. Children cannot be trained most effectively in an autocratic school for later participation in a democratic state. They cannot secure practice in initiative and self-control when all control and initiative come from outside themselves. Upon them must be made to fall in increasing measure the burden of leadership and responsibility. At the same time, however, there must be avoided too rapid and too great a shifting of the center of authority from the teacher to the children. Young children naturally depend upon outside direction, and need it. All children, moreover, must learn to respect an authority external to themselves as embodied in the teacher in school and elsewhere in officials of the state. Hence too loose a democracy in school is quite as undesirable as too rigid an autocracy. There is need for a rational policy lying between these extremes.

The foregoing suggestions are in line with actual developments in school practices. In fact, they are mere commonplaces to anyone who is acquainted with current educational literature and with modern efforts at school reform. Such features of the modern school as "pupil participation in government," the "socialized recitation," "cooperative study," and "self-directed pupil activities" of various sorts are concrete evidences of the democratic trend in education. They are evidences that schools, like other social institutions, are reflecting the democratic movement, and also that they are endeavoring to discharge their duty of training children for later participation in a democratic society. By striving to remove unnecessary restrictions upon the free self-expression of their pupils the schools are seeking to prepare these children for that larger society in which the opportunity for self-expression is constantly becoming more equable and free.

The writer believes also that these suggestions are in entire accord with psychological laws governing the transfer of training. Proper conduct in school is very like proper conduct in life outside the school; the two situations present innumerable identical elements. Moreover, many if not most of the activities appropriate to a democratic school need not be kept upon the low plane of habit, but should be raised to the higher status of transferable ideas and ideals. And so far as the limitations of biological inheritance are concerned, there is nothing in any of the suggestions here made which would involve that problem.

We have now suggested two ways in which education may function to preserve and propagate democracy. It serves to recapitulate the democratic experiences of humanity, and it helps to develop the democratic aspects of individual human nature. It teaches a knowledge of democracy and also trains children in democratic ways of living. There is yet a third manner of its functioning. Every phase of man's thinking and doing—of which phases democracy is one—is benefited by education's influence as the means of general enlightenment. The ramifications of this influence are too manifold to trace. One of them, however, is so momentous and evident as to have become a platitude of politics. But it is none the less significant because of this fact, and in spite of its triteness must be included in this attempt at a survey of fundamentals.

A democracy, of whatever sort, is an organization of leaders and followers in which the former are selected by the latter. It is also an organization in which controverted issues are settled by majorities.

In both these instances the mass of members makes, or should make, the ultimate choice. But to choose leaders or issues wisely, or even effectively to follow the one and carry out the other, this mass of individual members must be enlightened. Moreover, it is necessary that the members of a democratic unit be able to think in terms of the whole group. The essential democrat, perhaps, thinks in world terms, in terms of human kind. This enlargement of the social vision is another concomitant of enlightenment. Probably no process of education can ever bring all men to this larger outlook. Perhaps the social imagination of most is inherently too feeble to encompass a very wide field. But the enlightenment, and the equipment for further enlightenment, which education brings are recognized as very vital factors to this end.

If the discussion which has preceded be accepted, then education does contribute to the progress of democracy in at least three different ways, and these contributions are made through both its content and its form. It contributes through its content when it affords instruction in the nature and history of democratic institutions. It contributes through its form when its organization is such as to permit daily practice in democratic relationships. Both content and form enter into its effectiveness as a means of general enlightenment. All these functionings are necessary. Knowledge without practice is vain, and practice without knowledge is equally ineffectual; and the limitations of specialized knowledge and specialized practice need to be transcended by enlightenment.

In conclusion, we may freely acknowledge that at least two unproved hypotheses have underlain this discussion. We have assumed that humanity progresses in at least a cultural way, and we have assumed that that increase of opportunity for free and equable self-expression which has been styled "democracy" is one aspect of this progress. Both of these hypotheses may be denied, but we can do no more here than to acknowledge their presence and leave them unproved. But perhaps most readers will be ready to accept them as does the writer, and to agree with him further that this paper has dealt, however unsatisfactorily, with two of the most fundamental agencies in the advancement of the race.

THE NORMAL SCHOOLS OF FRANCE FROM 1794 TO 1890

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An Abridged Translation[1] by Edith A. Waterfall

I. INTRODUCTION: THE BEGINNINGS

The honor of having founded the first (normal school) in France is, by general agreement, conceded to the Convention. . . This honor is deserved, as we shall show in the following. Nevertheless, we should be deceived in believing that before the revolutionary period there had been no thought of normal schools or of similar institutions. The advisability of founding institutions, where under a special discipline, teachers of youth could be prepared, was clearly recognized by rare but excellent spirits at the end of the seventeenth century and during the eighteenth century.

The Abbé de La Salle, founded the Order of the Christian Brethren; but his disciples were too few to suffice for all he had planned for them to do. It was then that he conceived the project of opening a house where, under the direction of masters graduated from his order, lay teachers could be prepared who would settle in poor parishes which lacked a single teacher. Therefore, he founded at Rheims, in 1684, an institution which was transferred the year following to Montcornet, near Mezières. This seminary did not survive its founder; it may even have disappeared before him.

However this may be, the idea had been started, and towards the middle of the eighteenth century, it reappeared under another form. The parliament, principal author of the expulsion of the Jesuits, had to find the means of replacing them. It ordered an investigation into "the condition of instruction in France," and one of the results of this inquiry was to prove that in France, at that moment, there did not exist a teaching body capable of replacing the Jesuits. Therefore, President Rolland, in his celebrated "account rendered" of 1768, advocated with force the creation of a "seminary for professors" or as we should say now, an institution in which those wishing to teach would come to undergo a kind of noviate, under the control of the ablest of the masters of the University. President Rolland, less interested than the Abbé de La Salle in popular instruction, thought only of preparing college professors. This then is the origin of the higher normal school rather than of the elementary normal school. However, this immediate plan came to nothing.

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[1] From "An Historical Note on Normal Schools," in the collection of pedagogical monographs published for World Exhibition of 1889, *Musée Pédagogique. Recueil des Monographics Pedagogiques*, Vol. II, pp. 375ff.

But as the idea was good it made headway. From France, where it was born, it passed to Germany. At the beginning of this nineteenth century Germany had about 20 seminaries while France had, to all appearances, forgotten the idea of La Salle and of Rolland.

This idea was however only slumbering. It awoke with renewed vigor in the midst of the torment of the revolution, and this time to perish no more. . . Violently attacked and on the point of surrender when liberty is threatened, it reappears with greater luster each time that the principles of the Revolution triumph. So that one can say that the history of our normal schools, like that of all our scholastic institutions, is bound up in the history of our public liberties. From this point of view, we can divide its history into four periods:

1. From 1794 to 1830;
2. From 1830 to 1850;
3. From 1850 to 1870;
4. From 1870 to the present day.

II. From 1794 to 1830

On the ninth brumaire, year III (Oct. 3, 1794), the Convention, on the report presented by Lakanal in the name of the Committee of public instruction, passed the famous decree which established normal schools to prepare for the elementary service.

By the terms of Article 1 a normal school was to be founded in Paris to receive "citizens already instructed in the useful sciences" and who would come "from all sections of the Republic in order to learn, under professors, the leading authorities in their own subjects, the art of teaching." The name "normal school" appeared for the first time and Lakanal took care to justify it (from *norma*, rule) saying that it had been chosen in order to emphasize that the new school ought to regulate the whole of education. These citizens were to be 21 years old (Art. 4). The length of the normal course was fixed at "at least 4 months" (Art. 9). The instructors should "give lessons to the pupils in the art of training character and of inclining the hearts of young republicans towards the practice of public and private virtue" (Art. 7), and teach them "to apply to the teaching of reading, writing, the first elements of arithmetic, practical geometry, history, and French grammer the methods indicated in the elementary books adopted by the Convention and published by its orders" (Art. 8).

"The pupils prepared by this republican school" would return "at the end of their studies, to their respective districts" and would open "in some important place in the canton, chosen by the district administration, a normal school with the object of transmitting to those citizens and citizenesses who desired to devote themselves to teaching the methods they had themselves learned in Paris" (Art. 11).

The Paris Normal School had a brilliant but short existence. Opened on the Jan. 20, 1795 it was closed by a decree of the same year (May 15, 1795).

The Convention had attempted too much and overreached itself. Amendment would have sufficed, instead came destruction. The cause of the normal school was compromised for some time.

Thirty years elapsed. Napoleon founded the University. The decree of March 17, 1808 ordered (Art. 107 and Art. 108) "that the University should take steps to secure the teaching of reading, writing, and elementary arithmetic in the primary school by experts. To this end, one or more normal classes will be established near each Academy and within high-schools (*colleges*) and *lycées*. In these the best methods of teaching reading, writing, and ciphering will be demonstrated;" and the decree of Nov. 15, 1811, takes care to add, "The authorities will see to it that the masters do not carry their instruction beyond these limits." Reading, writing and ciphering! The program was modest and we are indeed far from the vision of the Convention. At least the intention was good. Unhappily nothing was done by the Imperial Government to secure the carrying out of these orders.

At one place only was this decree of 1808 put into execution. At Strasbourg in 1810, through the efforts of the prefect Lizai-Marnesia and of the Superintendent [*Recteur*] Levrand, the first French normal school was opened; first in point of time and long first in pedagogical zeal and service. This school, organized on the plan of the German seminaries, numbered at first 60 bursars from 16 to 30 years of age and unlimited independent students. The length of the course originally fixed at 4 years, was reduced to 3. Instruction was given in the French tongue, the German tongue, arithmetic, elementary physics, penmanship, geography, drawing, music, singing, agriculture, and gymnastics. The students also studied the best methods of instruction, that is to say pedagogy, or rather methodology, which was the sole pedagogy then. With the exception of history, the omission of which is surprising, we teach no more in our own days.

The government of the Restoration could not regard the establishment of normal schools with a friendly eye; so it did nothing to add to their number. On the contrary the law of February 29, 1816, recommended (Art. 39) "the favoring wherever possible, in the great communes, of the consolidation of many classes under a single master helped by many assistants, in order to train a certain number of young people in the art of teaching." This was the unfortunate institution of *stagiaires* (apprentices) that the Restoration tried to organize and which the law of 1850 borrowed, for what purpose is well known. If this organization had prevailed that would have been the end of normal schools. Happily, though the government was indifferent and even hostile, the efforts of devoted men served to effect some progress.

At Heldefange and at Bar-le-Duc the example of Strasbourg was followed.

At Paris, the society of elementary instruction which had set itself to spread the method of mutual instruction, founded a model school where masters could be trained in the practice of it.

In 1821 the council-general of the Seine-Inferieure decided that a normal school should be opened at Rouen. This school soon acquired a great reputation in the region. It was this Rouen normal school which founded the first chair of agriculture (1834).

About 1828, however, a liberal ministry came into office under M. de Martignac, and the new minister of public instruction, M. de Vatimesnil won honor by uniting on a national scale the hitherto isolated efforts of individuals and departments in favor of normal schools. This was the first official intervention of the State in the founding of normal schools, and, as if these institutions had only been waiting permission to be born, 10 were opened one after another; at Mirecourt in the Vosges; at Toul in the Moselle; at Charleville in the Ardennes; at Saint-Remy in the Haute-Saône; at Courtfontaine in the Jura; at Dijon, in the Côte-d'Or; at Salers in the Cantal; at Bourges in the Cher; at Orleans, in the Loiret; and at Ajaccio in the Corse.

The fall of the ministry did not stop the movement, and when, in 1830, liberal ideas triumphed, it spread, rapidly, over the whole of France.

III. From 1830 to 1850

From a parliamentary document (the report of M. P. Bert, presented to the Chamber of Deputies in 1879) we learn that 15 normal schools were founded during the years 1830, 1831 and 1832: At Gueret, Versailles, Chartres, Grenoble, Privas, Evreux, Angers, in the Puy-de-Dôme, in the Somme, in the Ille-et-Vilaine, in the Lozère, in the Manche, the Seine-et-Marne, in the Ain and in Vaucluse; so that at the moment when M. Guizot became Minister of public instruction for the first time, there were 29 normal schools in full activity in France.

Before proceeding to the government control initiated by this minister it will be well to glance back and determine the character of the schools created up to then thanks to local initiative. Evidently, and by virtue of their origin, the schools will not be alike. At Heldefange the normal school was established in an old château; at Toul, Charleville, Nîmes, and elsewhere, the school was in connection with a secondary school, or private school. Diverse also was the organization of the schools: here the dormitory system prevailed; there the day student; generally both. The average value of the bursaries or scholarships was 300 francs. The period of resident study was usually 2 years; sometimes 1 or 3. The majority of the schools were under lay control. Their programs also were varied, but it seems that they all endeavored to give a pedagogical turn to the instruction. Not all of the normal schools had training schools; in general the students practiced the art of teaching either in the small classes of the secondary schools, or in the village schools, or, as at Versailles, in the continuation schools (*cours d'adultes*).

The teaching body appears to have been reduced to its most simple expression: a director and two or three professors borrowed from the secondary school by the director and with the consent of the superintendent (*recteur*). The director was appointed by the Ministry of Public Instruction on the recommendation of the prefect and the superintendent.

In all the lay schools a commission of over sight consisting of the director and four others nominated by the perfect or rector, had charge of the economic arrangements and of the students and masters. The age of admission varied from 18 to 35 years. The majority of the students were unmarried but there were some married men also.

One of the most original aspects of the normal schools of this period was that they were open to teachers in service. During the vacations such teachers came to attend "the school of methods;" sometimes they came as pupils for a year having placed a supply, at their own cost, at the head of their schools.

But the moment was approaching when the number of schools was to be multiplied and when a firm hand was to attach them more directly to the State and prove a more thoroughgoing uniformity.

In October, 1832, M. Guizot became Minister of Public Instruction. He immediately ordered an inquiry into the normal-school situation, and on December 14, 1832, appeared the law which might be called the "charter of the normal school." Modifications, of which some are important, have been added since; but the groundwork remains the same.

Up to this time the normal schools had been exclusively departmental institutions; the law of December 14th did not completely break this bond, but formed another with the central power. The schools thus became, in part, State institutions. They have since retained this double character; but while the bond which unites them to the department tends to relax more and more, that which binds them to the central power is growing stronger each day, so that we can foresee the moment when, like the lycées, the normal schools will be exclusively under national control.

The subjects of instruction are determined by Articles 1 and 3 of the law of 1832. They comprise "moral and religious instruction, reading, writing, arithmetic, including the legal weights and measures, French grammar, linear drawing, surveying and other applications of practical geometry, notions of physical sciences applicable to everyday life, music, gymnastics, elements of the history and geography of France." To which must be added "apprenticeship to the best methods by which the student will be practised in one or more primary classes annexed to the normal school, the civil code, grafting and pruning of trees."

In the letter of instruction which accompanied the law, M. Guizot said: "If it should happen that some articles of this general law are contrary to special laws already in vigorous operation in certain normal schools and instituted by their founders, my intention is not to abolish these latter rulings; they ought, on the contrary to be observed most carefully, for one may suppose them better suited to the circumstances and to local needs."

A circular of July 23 fixed the number of assistant masters at two.

For special courses visiting professors were added to this reduced personnel. There was no direct ruling as to their age or capacity, but for a long time both directors and visiting masters were chosen from amongst the functionaries of secondary education. It was not until 1845 that the directors were "taken from the field of primary instruction.

The Commission of Oversight received powers as numerous as they were important. The law of 1832 charged it with supervision in "all matters of administration, instruction, and of discipline" (Art. 17). Its members were nominated, like the director, by the Minister of Public Instruction, on the recommendation of the Rector and of the Prefect. The director assisted at the meetings of the commission with a "deliberative voice," "except in matters concerning himself personally" (Art. 18). The Commission visited classes and questioned the students. It received from the director a yearly report on their discipline and studies. On this it named the students to be promoted to the second year of study. At the end of the second year the students were examined before the Commission. Article 24 enjoined the Commission to deliver to those students who were successful a certificate which they could produce before the jury charged with the bestowal of the certificate of proficiency (*brevet de capacité*).

No pupil, internal or external, could be admitted before the age of 16 years and the passing of a preliminary examination (Art. II). Finally, the candidates had to produce a certificate of good conduct from the mayor of their commune, and to undertake to teach for at least 10 years in the public schools. We note, in closing (Art. 16) that "primary teachers can be admitted to the course for 1 year, and during the vacations . . . in order to strengthen the knowledge they already possess, and to learn to practice the new methods."

In spite of its importance the law of 1832 is not the act of M. Guizot which had the greatest influence on the future of the normal schools. It was the law of June 28, 1833, which originated the new developments. In explaining the motives of this memorable law, after having described the chief features of the new organization of public instruction which he was preparing, M. Guizot said, "All these pains and sacrifices will be in vain if we do not succeed in giving to the public school a capable master, worthy of the noble calling of instructor to the people." Then, having sketched the portrait of this instructor, he concluded: "The making of such masters is a difficult task, but it must be succeeded in or we shall have done nothing for primary instruction . . ., and for that, primary normal schools are indispensable: therefore we propose to establish one in each department." The Chambers were less liberal than the Minister, and Article II of the law of 1833 was amended to read, "Every department must support a normal school, either by itself, or in cooperation with one or more neighboring departments."

Very few departments accepted the latter alternative. In general each department wished, and rightly, to have its own normal school. In 1833 alone 17 departments responded to the appeal; in the year following eight other departments followed suit. In 1835 three new normal schools were opened. Then when M. Guizot left office in 1836 France had 68 normal schools. Nearly 15 years passed before all of the 86 departments were provided.

It was natural that an institution so unanimously appreciated, should be judged equally indispensable for the provision of women-teachers. As long as the instruction of girls was neglected and religious orders had the monopoly of this field, the need was not felt; but when the ordinance of June 26, 1833, had given an impetus to this instruction, new public schools were opened and it became necessary to provide for their staffing. The religious orders at once adopted the new movement; but a lay personnel was also dreamed of. This movement passed through the same stages as that for the preparation of men teachers: normal classes (*cours normal*) were opened in connection with boarding-schools or higher primary schools for girls. In them the young women destined for the teaching profession were trained.

Unhappily the time of enthusiasm was passed, and already harsh accusations began to be made against the normal schools, the prelude to the storm which burst in 1850. They were reproached with having surpassed the limits assigned to them by the law of 1832, of having exceeded the program of instruction, and of thus forming superficial teachers, impatient with their lot, full of themselves, and little prepared for the humble condition which awaited them.

So things were up to 1848. When the second Republic was proclaimed, Carnot, Saint-Hilaire, and Simon prepared liberal laws on primary instruction: But it was the law of M. de Falloux which was passed! In introducing it he said, "What is the moral value of the primary normal schools? Serious, impartial, political voices are being raised demanding their complete suppression. . . the institution has been attacked as, in itself, essentially vicious: It is said that young people under twenty years of age ought not to pass in a common fermentation their most difficult years; that they cannot see at close quarters the towns in which the greater part of them will not live, touch upon all kinds of experiences . . . without getting an exaggerated sense of their position, a false idea of their duties; that they cannot be decorated with superficially acquired titles without getting a restless ambition, and that it is a first-class blunder to send to country life, those who are being prepared in advance to regard it with disgust and hatred."

M. Falloux concluded thus, "These objections are grave; however we believe that the experiment should continue." We shall see at what price. Article 35 of the law of March 15, 1850, was adopted by the Assembly: "Every department is obliged to provide for the supply of masters for the communes by means of pupil-teachers, either in institutions for primary instruction . . . or in normal schools established to this end by the department. The normal schools may be suppressed by the general council of the department or by the Ministry on the recommendation of the academy." The "Friend of Religion" can cry: "The normal schools, so dangerous, so powerful for evil, and which have so deplorably denatured the character and mission of the teachers, are suppressed!" Then begins the third period in their history.

IV. From 1850 to 1870

The law of March 15, 1850, did not destroy the schools but it offered to their numerous enemies three ways of destroying them: A decision by the general council, a ministerial decree, and schools of apprenticeship. The apprenticeship schools had the fortune they deserved; they arose ingloriously and died obscurely. No minister made use of the power conferred on him by law, and in the whole of France, only four councils general suppressed their normal schools.

The law of March 15 was silent with regard to the normal courses for young women; these had developed in the shade of the convent and no one disturbed them. There were already 21 of them and by 1879 the number had increased to 50.

If the law of 1850 did not destroy the normal schools, it still entailed the most unhappy consequences. The program of 1832, already so modest, was still further reduced; the only compulsory subjects were religious and moral instruction, reading, writing, the elements of the French language, arithmetic, the metric system and religious songs. It was the instruction of a small seminary, not of a normal school. Its aim was to place the hearts of clergy in the teachers.

The only praiseworthy parts of the scheme were that the director and assistant masters were appointed by the Ministry on the recommendation of the rector, and that the period of study was fixed at 3 years.

But the time of trial for the normal school was drawing to a close. The Ministry of M. Rouland (1856–1863) was a period of peace for the institutions. That of M. Duruy was a period of reparation. One of Duruy's first acts was to sign the decree of September 4, 1863, which raised the minimum salary of directors and assistants. Some weeks later (October 17), learning that student-masters leaving the normal schools looked in vain for posts, he insisted that the prefects should reserve the best posts for them; and speaking of them he said: "The young men are possessed of capacity and character. They form, as experience has shown, the elite of our teachers."

He asked the pupils and masters to keep exact meteorological observations. He recommended the teaching of gardening; music was made compulsory; educational conferences presided over by the superintendent "on the mission and duties of instructors" were instituted; later agricultural instruction was introduced.

But of all the measures taken by M. Duruy, the one which had the greatest influence on the future of normal schools was the decree of July 2, 1866. Its principal aim was to widen the program of studies.

By the decree of December 31, 1867, a most important matter, the conditions of admission, was settled. Candidates were to be submitted to a serious examination which would comprise the elements of history and geography and they could offer singing and drawing as optional subjects. Finally, to assure a succession of student-teachers the Ministry proposed to establish (October 20, 1868), near the normal schools, preparatory classes where the sons of teachers, who showed promise, would be admitted free.

The status of the directors and assistant masters was improved. They were given more time and liberty, and the Ministry invented a means, the associating of the third-year students in the duties of supervision, which besides relieving the masters would accustom the students to "the right use of freedom and to serious responsibility." Finally, the program of the training school was carefully overhauled, and the master in charge of it was raised to the rank of an assistant master.

One of the last acts of M. Duruy's Ministry was the circular of July 6, 1869, in which the Minister, who had done so much to broaden the education of girls, declared it to be his intention to convert the normal courses into schools for women-teachers. But political events hindered him from realising this project. One year later the Empire fell.

What M. Duruy wished to do had been already begun. The law of 1850 had decreed the establishment of a primary school for girls for all communes of 800 inhabitants "whose resources permitted." The law of 1867 extended this obligation to communes of 500 inhabitants. From this legislation fresh needs arose. Even in the departments least hostile to convent instruction it was apparent that the normal courses offered little guarantee of proficiency. Although these institutions received bursaries they resisted State control; good teaching methods were unknown; the instruction was mediocre and its aim not in the least the one intended. As to professional education, it did not exist, there being no training school. People compared the results of the course with those obtained in the normal schools for men teachers, and those departments which honored education most began to change their normal course into a normal school. The Jura et l'Orne set the example in 1842. Following her came Doubs, les Bouches-du-Rhône and Loiret in 1843, the Ardennes in 1845, Corse in 1854, Haute-Savoie in 1861.

V. From 1870 to 1890

During the first years of its establishment, the Third Republic had enough to do to defend its existence and to dress the wounds of France and could do nothing definite for primary instruction or for normal schools. It was not that these important matters were forgotten. Never, indeed, had questions of education inspired such universal sympathy, and diverse efforts were made to raise the yoke of 1850; but they failed before the opposition of a majority little friendly to primary instruction.

We have to wait till 1879—that is for the first ministry of M. Jules Ferry (February 4, 1879—November 14, 1881)—for anything new to record, but in it we reach the high-water mark of our subject. By this time the Republic was safe from harm, and its finance prosperous. With lofty ideals and sure statesmanship M. J. Ferry seized the favorable moment. Aided by M. Buisson, the eminent director, he restored the traditions of the Revolution, and, with patient energy, reorganized our entire national system of education on three principles: Compulsory education, free education, lay education.

It could not be but that the normal schools would share in this work of reorganization. Thus we find laws, decrees, resolutions and circulars directly concerned with these institutions following each other ceaselessly. We must content ourselves with touching upon the most important whilst endeavoring to convey briefly their spirit and compass.

The most sweeping of these measures was the law of August 9, 1879, by which every department was required, within 4 years, to "be provided with a normal school for men-teachers and a normal school for women-teachers, capable of assuring the supply of both according to the needs of the communes" (Art. 1). At the time of issuing this law of 1879 France had 79 normal schools for men; all the departments have now (1890) complied with the law. This side of the work is finished.

The provision of normal schools for women has not yet reached this state. In 1849 there were 19 of these institutions. It is easy to see that the reaction which followed the law of 1850 would not favor their development. It was only after 1870 that the pace quickened. Eleven new schools were founded up to 1879. The greater number of these were under lay control; the others disengaged themselves little by little from the bonds which united them to the religious orders. In 1879 there were only nine which were not lay; they have all been lay since. At the present day, it is hardly necessary to add, all the schools are lay. There are today (1890) 82 normal schools for women-teachers.

Like the schools for men, each has a training school where the students practice; they have besides a second training school for directresses of the infant school (*école maternelle*). The normal schools are today in new or improved buildings.

Such have been the salutary effects of the law of 1879. But it was not enough to create normal schools every where; it was necessary also to organize them, to animate them with a new spirit, in harmony with present needs, to break the last ties binding them to the obsolete, to let in more light and air on their discipline and instruction, to regulate the duties and rights of masters as well as of pupils, and finally, to develop the program of studies within the limits set by too great ambition on the one side and too great curtailment on the other. This was the work of the years which followed the passing of the law of 1879.

In February, 1880, the Minister announced that the resources placed at his disposal would allow him to appoint a fourth assistant master in 12 of the normal schools. This ought, he said, to be extended to the others as soon as possible. The fifth of June following, a decree created the professorial certificate (*certificat d'aptitude an professorat*) and two years later that for instructing in normal schools *le certificat d'aptitude à la direction des écoles normales*). In January, 1881, the payment of directors, directresses, assistant masters, and mistresses was raised and fixed at a rate which enabled them to live fittingly. On June 16, 1880, the great law which made education free was passed, and its benefits extended to the normal schools. In July of the same year the Higher Normal School for women-teachers at Fontenay-aux-Roses was founded, and in March 1882, that of Saint Cloud was opened, both being intended to safeguard the supply of teachers in the normal schools. These two creations have crowned all that has been done for these institutions. Finally, there appeared the decree of July 29 and the resolution of August 3, 1881, which although modified to some extent by the resolution of January 18, 1887 and of July 20, 1888, and of January 10, 1889 are yet the base on which the normal school edifice rests today.

But our task stops here: The task of tracing the past of these institutions, not of describing them as they are today.

BOOK REVIEWS

Sanford, Fernando. *How to Study, Illustrated Through Physics. How to Study Series.* The Macmillan Company, 1922. 56 pages.

This essay is introduced by Mr. F. M. McMurry, whose praise of its theme and purpose is perhaps all the recommendation that the study needs. The introduction itself has the peculiar merits of the author's well-known pungent phrasing of important ideas, and deserves the close attention of all who read the monograph. He finds, however, a difference between "thinking" and "the acquisition of knowledge" which seems quite unduly to limit the possibilities of the latter; and he apparently is much less sanguine in regard to the custom of the rank and file of teachers of discriminating between thinking and memoriter work than the reviewer has been—which possibly indicates that the reviewer needs more and better practice as an observer.

The essay itself seems a real contribution to the literature of teaching, and especially to the teaching of physics. Those who recall and liked Mr. Dewey's classic address on Science, in 1910, will be grateful for the constructive suggestions of this essay. It has a special value for subject-matter teachers in normal schools and teachers' colleges, as a sample of the kind of valuable perspectives and insights that have been least capitalized in the past. A close study of the catalogue descriptions of physics courses in schools for teachers suggests that to very few of them has it occurred to use the approach suggested by Mr. Sanford.

The first third of the essay treats such topics as the relation of *purpose* to *method* of *study;* the difference between the method of study which leads to *scholarship* and the method of study which leads to "*the mental habits*" *of scientific thinking;* the special opportunities that physics offers for teaching scientific method; the meaning of natural law, and the like; and does it with engaging simplicity. The remainder consists of illustrations of the *method* of the masters of science: Roger Bacon, da Vinci, Gilbert, Galileo, Newton, *et. al.* and brings out "the four necessary steps in scientific method," "how skill in the different steps of scientific method has varied," and so forward.

Even such fleeting glimpses as this brief essay gives over the development of the great laws of physics are fascinating. It ought to fire the imagination of teachers of physics.

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Columbia University

I

Every civilized country is to be judged by the relative amounts expended for education. If we take a broad view of history, we find that there have been no less than four stages in the development of governmental functions. In the earliest stage we have only the repressive function of government. When disorder occurs, the community is called upon to suppress it: when disease and plague appear, the government does its utmost to combat it: when war breaks out, the government is concerned to bring it to an end as quickly as possible. In the second stage of development, we find the preventive functions of government appear. It is not so much to fight the famine as to prevent it that we are now concerned: it is not to check the disease but to make its appearance impossible: instead of simply incarcerating the malefactor, we try the more modern method of preventing the appearance of the criminal. The preventive functions of government are more difficult and more costly. In the third stage of progress, we come to what may be called the period of ameliorative functions. The government is now concerned not so much with preventing evil things as it is with improving conditions and making them better than before. The government now not alone seeks to prevent famines, but tries to improve agricultural conditions: it not only prevents disease, but it endeavors in countless ways by its modern health department to make the sanitary conditions better than they were before: it not alone seeks to prevent the criminal from appearing, but it endeavors to turn the criminal into a law-abiding and decent citizen. The ameliorative functions of government call for far more of sustained effort and financial outlay. Finally, we reach the fourth stage of government activity, at the very outset of which we find ourselves at present. This is the period of what might be called the constructive functions of government. We do not simply build upon the actually existing situation and improve it, but we now seek to create entirely new conditions and to make something exist which never existed before. Although illustrations may be found in almost every phase of government effort at present, the chief example is to be seen in the domain of education. The very word education means the drawing out, the leading out of something new, the elaboration of the individual and the group mind of something which did not exist before. But just because of this fact, education is the most definite of all governmental functions. I wonder how many have ever read the admirable book of Mr. G. D. H. Cole, the English Guild Socialist. With his economic views I do not find myself in harmony; but with his high and lofty conception of what education ought to mean, I fancy we can all agree. We have even now only a faint adumbration of what can really be accomplished by education. If this is true and if education is a manifestation of the highest stage of community effort, it is also true that it calls for the severest sacrifices. Perhaps the day will come when the greatness of the nation will be measured, not by the tens of millions spent for our battleships, but by the hundreds of millions spent for the schools.

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[1] Presented at the conference on Education held in connection with the inauguration of Dr. John M. Thomas, as President of the Pennsylvania State College.

II

Since then the needs of education are so pronounced, it is worth while to consider for a moment why the financial embarrassments have grown. This is due, in the first place, to the fact that education, like so many other functions of government, has been slowly progressing from private to public auspices. At the beginning, education, like the high roads, like justice, like protection, was entirely a private function. But while the streets, the army, and the courts have now become exclusively public in their nature, education has gone through only a partial development. We still find private schools, private colleges, private universities, and it is undoubtedly true that the impetus to modern educational reform has often come originally from private initiative. The kindergarten was for a long time private before it was adopted into the public system. The same is true with the vocational schools and with many other forms of pedagogical activity. The important point, however, is that with the passage of time, more and more phases of education have been taken over from private to public management. We find, moreover, continually greater manifestations of this public activity: Public textbooks, free dental and medical service and even free lunches have been added in not a few places. The net result has been an extraordinary rise in the expenditures for education.

The next point is a consideration of the fiscal principle governing these outlays. The educational activity of government has gone through the same phases as that of the other activities. The high roads, for instance, were originally run for a profit and only at a much later period was the practice introduced of just about covering cost, the so-called fee principle. Finally, it is only in the most recent period that toll roads have been abolished and that the principle of gratuity has been established according to which no charge is made for the use of the roads, the expenses being defrayed out the general revenue of government. In the same way justice, when taken over by the government, was originally a source of revenue to the early monarchs. At a much later period, the principle of fees was introduced: Even in the eighteenth century Adam Smith advocated the payment of judges' salaries by fees in order to stimulate their activity. It is only in very recent times that the province of fees has been restricted and that the court expenses, especially the salaries of the judiciary, defrayed out of the general fund.

The same is true of education. Even when education was assumed by government, it was for a long time run on the principle of profits. This was succeeded by the regime of fees, which is still the custom in the primary education of some of the European countries and in the higher education in some of the American states. The final principle of gratuitous service or free education was first introduced in the schools of Holland and in the public school system of some of the American colonies. Step by step the gratuitous principle has spread from one form of education to another, as a result of modern democracy. As a consequence, the expenditures have steadily mounted.

In the third place, we have to consider the ways and means of covering this increased expenditure. Here again we notice an interesting fiscal development. The sources of early revenue in every government were very different from those that exist today. At first, in fact, contributions to the support of government were entirely voluntary and it was not until the drain upon private benevolence and charity became too great that the voluntary contributions were converted into compulsory contribution. We know the exact date when this transition occurred in each of the American colonies, and when the system of appeals to those "whose heart is willing" fell upon such deaf ears that a change had to be made. But even then, and for a long time, most of the public revenues came from other sources. Almost down to the end of the eighteenth century the colonial revenues were derived from fees, from land and quit rents, from special assessments, and, above all, from lotteries. The latter was an especially favorite method. Many a church and many a school was started and supported by public lotteries. The very institution with which I am connected, Columbia University, was made possible, as Kings College, through a public lottery. Even when compulsory contributions were initiated they assumed the form, for a long time, of indirect payments, more or less in return for supposed government activities. Direct taxes upon the individual were sporadic and slight, and the burden was scarcely felt.

In modern times, however, all this has changed. Lotteries have disappeared; the land revenues of government have become negligible; the relative importance of fees has greatly diminished; the chief reliance of government today is upon taxation regularly levied upon the individual.

The four reasons, therefore, why expenditures for education have become such an important fiscal problem are: First, the growth in the scope of education itself; second, the transition from private to public education; third, the change in the fiscal principle of profits or fees to the principle of gratuitous service; and fourth, the virtual disappearance of the earlier forms of revenue, with almost sole reliance upon taxation.

III

The above statement is however not entirely sufficient to explain the present situation. For while the amount to be raised by taxes has indeed increased, the readiness of the average citizen to submit to public charges has also undergone a notable development. There is far more sense of public collective responsibility at the present time than in former generations: There ought accordingly to be little difficulty in raising from each individual his share of the public expenses. While the expenditures for education have indeed increased, by leaps and bounds, the wealth of the community has also multiplied. In fact, at no time in the history of the world have there been such prodigious strides forward in the accumulation of wealth and in the progress of individual well being. There must be some other explanation of the present situation.

To the economist and the student of finance, the explanation is simple. The original form of direct taxation in the country was the general property tax. It was a system which responded fairly well to the needs of the day and to the demands of the government. In a more or less primitive community a man's wealth is largely measured by his property. Today yet we say that a man is worth so many dollars; whereas in England we speak of a man being worth so many pounds a year. In those early days when there were neither very rich nor very poor, when everyone worked and when almost everyone possessed a modest competence, general property was the best indication of a man's wealth and therefore the most evitable measure of his ability to pay taxes. Consequently, until almost the period of the Civil War the public revenues kept pace with the increase in property and there was no problem of educational finance.

Beginning, however, shortly after the Civil War in our most advanced states, and thereafter slowly spreading to other parts of the country, a complete fiscal revolution became visible. This was a result and concomitant of the great economic change known as the industrial revolution, the transition of the economic system from that of a primitive agricultural community to that of a highly diversified industrial community. We now live under what is known as the factory system or the age of the machine, based on a revolution in chemical and mechanical methods. The new forms of business enterprise, moreover, have brought with them the appearance of the corporation and the development of corporate securities.

As a consequence, the old general property tax no longer sufficed for more modern needs. While real estate indeed remained, personal property changed in its constituent elements. There was, relatively speaking, less and less tangible and visible personality and more and more evidences of legal rights. Slowly but surely personal property accordingly slipped out of the assessment lists with a resulting increasing burden upon real estate.

Not alone did the general property tax thus gradually lose its efficacy but the newer business conditions caused a transition in the criterion of wealth from property to profits or earnings or income. In modern times there are large classes of individuals who live upon their salaries or earnings and who spend most of what they earn, thus accumulating comparatively little property. A property tax would leave scot free the great lawyer or physician or architect or engineer or railway president who spends most of his earnings. Furthermore, under modern economic conditions, the prosperity of a business man is no longer judged by his property. The mutations of modern life and the variations in the turnover have caused even the business man to apply the yard stick of earnings or income rather than of stock-in-trade. Other reasons, for which there is here no time, might be mentioned to explain why property has been supplanted by income or earnings. In order to realize this change, we have only to look at the financing of the recent war compared with that of former conflict. In the Civil War the income tax was almost negligible in its contribution to the war expenses; in the War of 1812 it did not exist at all. In the recent war, however, the major part of our entire colossal outlay was derived from taxes on income and profits.

It is easily seen, therefore, how the present educational embarrassment has arisen. In all those states which still cling, as most of them do, to the general property tax, the increasing wealth of the community wealth is no longer tapped by the revenue methods. With a base of taxation continually receding and diminishing, it is only too apparent that the burden of the general property tax has become unendurable.

The state of Pennsylvania, indeed, was one of the early commonwealths to break away from the general property tax for state purposes. But although it aliments its. state revenues from taxes on corporations and from intangible personality, Pennsylvania still in the main depends upon property as the chief source of its revenue and finds itself in continual embarrassment. Yet Pennsylvania is one of the wealthiest of American states. Its land is worth far more per acre than in the adjoining commonwealths. It contributed to the income and profits taxes of the great war about one-sixth to one-seventh of the entire amount. Yet from the point of view of its financial support to education, Pennsylvania stands twenty-first on the list. It has been distanced by all those states which have adopted more modern methods of revenue.

IV

What then are the remedies? I should say that they consist of two, economic and political. The economic remedy is to develop a fiscal system which will respond to modern needs, which will tap the resources of the community according to the relative ability of the individuals. If we look at the most advanced states we find that this fiscal reform has assumed three forms:

1. The taxation of individual incomes.
2. The taxation of business.
3. The taxation of inheritances.

In New York, for instance, the personal income tax yields, at a very low rate, from 35 to 40 millions a year. The new business tax, also based on a criterion of earnings for the most part yields almost 45 millions and the inheritance tax yields over 20 millions a year. What has been done in New York has also been accomplished in Massachusetts and even in some of the states of the middle west like Wisconsin. California, which stands at the head in educational finance has been able to accomplish a similar result by developing a modern system of business taxation. Even in Delaware the recent introduction of the income tax has been due almost entirely to the needs of public education.

Pennsylvania, however, still lags behind. It has neither an income tax nor a modern business tax, nor an adequately developed inheritance tax. The wealth lies at its doors ready to be tapped as it is being tapped for federal purposes. But an antiquated fiscal system prevents it from responding to modern needs. If the educational reformer will become for a time a student of taxation and finance, the path will be cleared. The continued reliance upon outworn methods, the old shibboleths like increase of assessment, equalization of property and the like are all in vain. The first condition of progress is an appreciation of the real secret of the present failure.

While this economic and fiscal change is of the first importance, there is also a political reform that is needed. All expenditure was originally local; all revenue was originally local. It is quite natural that there should have sprung up, in Pennsylvania, as elsewhere, the idea of home rule and the feeling that roads and the schools ought to be supported out of local revenues. The economic transition, however, has proved the falsity of this early method, just as in the federal and state government modern conditions have shown the shortcomings of that other shibboleth, the separation of governmental powers. Modern earnings and incomes can no longer be cabined and confined within local limits: For modern economic enterprise has become not alone statewide, but also nationwide and even worldwide in character. The consequence has been a great differentiation between localities. While some localities, like the great industrial centers, are teeming with wealth, others in the agricultural districts are woefully deficient. The state has been compelled to come to the aid of the localities in the construction of modern roads. While the state government is making indeed some contribution to the communities for education, the chief support is still derived from local sources. Thus we find that as individuals under the modern dispensation differ in wealth far more than in former times, so do our local communities. Just as there are many individuals who are unable to contribute to an income tax, so there are many local communities that are unable to maintain adequate school facilities.

What is needed, then, in Pennsylvania, as in so many other states, is a redistribution of governmental functions and of governmental revenues. The chief source of local revenue must always remain, for obvious reasons, real estate—the non-elastic element in public revenues. The elastic form of modern revenues is to be found in the state-wide system of income, business, and inheritance taxes. It is only proper that the locality where the needs are greatest should secure an increasing share of these state-wide revenues. If this is done, the day of the impoverished community in the small red schoolhouse will go and the distribution of state funds to localities will take place not on the antiquated basis of assessed valuation or population, but on the new and improved basis of educational needs which will vary from locality to locality. An educational system local in character and support is incompatible with an economic and fiscal system state-wide in its nature. Under the inspiring guidance of Superintendent Finnegan great and needed steps in advance have been taken in the centralization of educational administration. While there is still room, as we have heard in Dr. Capen's admirable address of this morning, for further cooperation and further centralization in purely educational matters, the time has assuredly come to take at least the first step to apply the same principle to educational finance.

We conclude then that what is needed above all in Pennsylvania is a realization of actual facts. Let us no longer, like the proverbial ostrich, put our head in the sand and refuse to look what stares us in the face. The wealth is here; the educational needs are here; all that is necessary is to bring about a correlation between the two. Let us determine no longer to live in a fool's paradise of outworn theories and indefensible shibboleths. Let us grapple manfully with the real problem and realize that in modern times the educational question has become primarily a fiscal question.

CAN HIGH SCHOOL PRINCIPALS IMPROVE THE COLLEGE TRAINING PROGRAM?

DOUGLAS WAPLES

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The dilemma of the liberal arts college is the dilemma of many of its departments—how to choose between the general needs of the many and the specific needs of the few; between the general comprehension of a branch of knowledge that is called liberal, and the specific ability to apply it that is called technical. There can be no decision between liberal and technical training as such. One can only say that where time permits both types of training should be offered. But where both types are offered the question of relative mephasis becomes acute, and this question can be studied with respect to students' needs. The state of Massachusetts makes no specific requirement of professional training for admission to high school teaching except in union school districts. Yet the quality of high school teaching is not perceptibly inferior to that in other states where professional training is required. College departments of Education in Massachusetts have thus full opportunity both to create and to supply a demand for such training on the part of prospective teachers. To meet this opportunity there is need for some criterion that shall indicate the proper emphasis of liberal and technical courses for the students concerned, and it is assumed that the problem of selecting such criteria is of general interest to all engaged in the preparation of high school teachers.

Two conclusions seems justifiable as the result of casual acquaintance with college courses. (*a*) There is need for some non-technical course in each department of education that shall attract students to teaching by arousing interest in the social significance of good schools and that shall also interpret education fairly to other students who will not teach. (*b*) Technical courses should predominate which give greater attention than is commonly given at present to the actual problems of the beginning high school teacher with less attention to data which do not apply to these problems directly. It is evident that these imply a decided shift of emphasis in the direction of technical training. Some data are herein presented which tend (1) to support these conclusions, (2) to indicate *the extent of agreement* among high school principals as to where this emphasis should be placed, and, consequently, (3) to suggest the value of high school principal judgments as one criterion for the readjustment of courses.[1]

The data to be considered were obtained in response to a tentative question-blank distributed in April 1921, but only those items are here mentioned which apply to the topics above. The purpose of the inquiry was to select by experiment a set of questions that high school principals might be able to answer with sufficient accuracy to benefit the courses in which most of their teachers are trained. The particular questions asked are here of only incidental importance. Forty seven per cent of the Massachusetts high school principals replied as follows:

Total...........	119 replies,	47 per cent of	255 high schools in	229 communities
Group I.........	38 replies,	61 per cent of	62 high schools in	38 cities
Group II........	44 replies,	57 per cent of	77 high schools in	75 towns
Group III.......	37 replies,	32 per cent of	116 high schools in	116 towns

These replies are tabulated in three groups according to the state classification of cities and towns: Group I, cities; Group II, towns over 5000 population; and Group III towns under 5000 which support high schools. This group division is primarily to suggest *the extent of agreement* among principals whose schools are somewhat equal in size. It should also serve to classify the teachers concerned on the basis of experience, and to suggest the greater opportunity for teachers in city schools (Group I) to obtain training in service. If these facts are kept clearly in mind, the following tables may be related to the three topics proposed for discussion with a minimum of comment.

While somewhat unrelated to the topics, these figures indicate the status of professional training among high school teachers of the state. Of the 3784 high school teachers in service on Jan. 1, 1920, 72 per cent were college graduates, 18 per cent were normal or city training school graduates, and 10 per cent had received no more than secondary school training—though this last group consists largely of teachers of practical arts and of teachers grown old in the service. Considering that nearly three-fourths are college graduates, it is interesting to note that less than one-half (47 per cent) of the teachers represented above have attended college courses in education either before or during service. While this situation casts some reflection upon the courses, it is largely explained by the fact that professional courses in local

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[1] Dean Kelly's study of rating by Kansas school officials of teacher-training courses in the University of Kansas gives returns from 54 principals of the state. (1920, *Proceedings College Teachers of Education.*) His detailed questionnaire is an excellent basis for similar investigations.

Table I.—Showing (*a*) the Average Number of Teachers per School, (*b*) the Proportion of Teachers per Group That Had Attended College Courses in Education Either before or during Service in 1921, and (*c*) the Principal's Guess as to Whether the Number of Teachers Who Had Attended College Courses in Education Had Decreased Since 1915

	Groups			Total
	I	II	III	
(*a*) Average number of teachers per school	39	16	5	20
(*b*) Proportion of group attending college education courses per cent	45	49	59	47
(*c*) Number of schools from which attendance at college courses was greater in 1915 than at present	3	4	3	10
Was less in 1915 than at present	28	29	22	79
No data	7	11	12	30

colleges are so recent. Sixty-eight per cent of Massachusetts high school teachers have had more than 5 years' experience, 25 per cent have taught from 2 to 5 years, and only 7 per cent are in their first year of teaching. In view of the fact that nearly all of this 7 per cent are in Group III schools, the report that 59 per cent of this group attended education courses in college is distinctly hopeful.

Table II.—Showing Replies to Question, "Do You Regard Courses in Education as Less, Equally, or More Valuable Than Courses in Subject Matter for Teachers in Service from the Standpoint of Skill in Teaching a Particular Subject? For Students Preparing to Teach

	For teachers in service			No data	For prospective teachers			No data
	Per cent less	Per cent equally	Per cent more		Per cent less	Per cent equally	Per cent more	
Group I	18	41	40	1	21	37	37	2
Group II	23	43	32	1	34	32	27	3
Group III	16	38	43	1	24	41	32	1
Total	19	40	38	3	27	36	32	6

This misleading question was designed to show the principal's attitude toward professional training as such. It should be obvious upon reflection that the only correct answer is "equally," since for the teacher the two types of courses are mutually dependent. But it inspires confidence in the principals' attitude to note that *in only one grouping are professional courses rated as less valuable than subject matter courses.* This illustrates the type of question upon which no agreement should be expected.

TABLE III.—SHOWING WHEREIN THE EFFECTS OF TRAINING ARE SAID TO APPEAR. PRINCIPALS WERE ASKED TO CHECK ONLY THOSE PARTICULARS IN WHICH THEY FELT CONVINCED THAT THE RELATIONSHIP BETWEEN TRAINING AND IMPROVEMENT WAS CLOSE

	Per cent, Group I	Per cent, Group II	Per cent, Group III	Per cent, total	Rank
More efficient class management	47	59	60	56	3
More skillful teaching	64	70	65	68	2
Closer cooperation with staff	42	41	32	39	4
Better influence on children	29	25	24	26	5
Broader professional outlook	82	91	73	83	1
No data	13	5	16	6	

There is complete agreement by all groups in the ranking of these items. This is to be expected, since the demonstration of these abilities is not affected by the size of the school. But the fact of such agreement at least indicates the possibility that helpful criteria for training courses may be found in such judgments. Except for "professional outlook," which may mean anything, the more specific effects of

TABLE IV.—SHOWING REPLIES TO QUESTION, "WOULD YOU ACCEPT COLLEGE CREDIT FOR A SEMESTER COURSE IN SUPERVISED STUDENT-TEACHING AS THE EQUIVALENT OF AS MUCH AS 4 MONTHS' SUCCESSFUL TEACHING"

	Replying Yes, per cent	Replying No, per cent	No data
Group I	25–66	12–32	1
Group II	30–63	9–21	5
Group III	30–81	6–18	1
Total	85–72	27–23	7

training are most evident. At face value this would seem to imply that professional training is most effective in point of technique, though the effects of general courses are necessarily less apparent.

Approval of practice-teaching by small schools implies that its beneficial effects have been observed by supervisors of the younger teachers who have done practice-teaching. The misgivings of Group I principals, 32 per cent of whom are opposed, may be due similarly to their infrequent contact with beginning teachers and also to the reluctance to pass judgment without further knowledge of the course that may be expected in older men. On the whole this tends to confirm the inference drawn from Table III—a premium is placed on technical training by principals of inexperienced teachers. And further, the judgments of each group reflect the different requirements of their schools.

TABLE V.—INDICATING RELATIVE VALUE OF TYPICAL COLLEGE EDUCATION COURSES. (LOW SCORE MEANS HIGH VALUE.) FOUR PRINCIPALS OF GROUP I, 6 OF GROUP II, AND 5 OF GROUP III DID NOT REPLY

Courses	Group I		Group II		Group III		Total	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Secondary education	1.8	1	2.2	1	2.1	1	2.5	1
Educational Psychology	2.5	2	2.7	2	3.1	4	2.8	2
History of Education	4.5	6	4.7	6	5.4	6	4.9	6
Educational Administration	4.1	4	4.2	5	4.2	5	4.2	5
Practice teaching	4.4	5	3.2	3	2.7	2	3.4	4
Special methods	3.5	3	3.3	4	2.9	3	3.2	3

The items of greatest interest are perhaps the complete agreement in according first place to Secondary Education and last place to the History of Education, the high rating of Practice-teaching by principals of inexperienced teachers, the high rating of Educational Psychology (including tests and measurements) by principals of large schools with pupil-grouping problems, and the general low rating of Educational Administration. The ratings again quite faithfully represent the different requirements of schools of different sizes. They point unmistakably to the need for a training to meet these requirements. It would thus appear that some confidence is justified in such group judgments and that high school principals may well contribute toward the closer adjustment of courses to their teachers' needs.

Aside from their bearing upon the emphasis of technical training, the judgments cited herein are intrinsically meaningless so far as specific recommendations for the improvement of courses are concerned. Yet this evidence that positive judgments can be rendered by high school principals with regard to college courses in general, should encourage the attempt to secure more specific ratings of the courses in particular colleges. It is common, of course, to obtain such ratings by at least two other methods; by asking the graduate himself to criticize the training program in the light of his subsequent teaching experience, and by allowing instructors of the training courses to observe the graduate at work themselves and revise the program to supply the teacher's deficiencies so far as may be possible. While each of these methods should be employed, the principals' ratings when sufficient in number constitute the most objective single criterion. They should consequently prove of real value provided that substantial agreements can be reached. Hence the improvement and standardization of such means of diagnosing the effects of teacher-training courses should result in a definiteness of procedure which few institutions other than city training schools can at present achieve.

In this general reference to "technical" courses there is room for a misunderstanding which it is extremely important to exclude. Such discrimination as has been made between liberal and technical courses is made solely with reference to content on the assumption that both are well taught. The prospective teacher is often better off without such instruction in technique as does not "open unto him a fair prospect." The dry mechanics of technique, however well adjusted to his purposes, will not operate without the necessary lubricant. For lack of dynamic instruction such technical courses must often prove a "finishing school," in another sense than that intended by those who coined the term. By the aid of dynamic instruction the technical course becomes liberal—if not for the champions of academic discipline, at least for the students concerned.

A SIMPLE LITERAL PERSONAL RATING SCALE

CLYDE FURST

Secretary, Carnegie Foundation for the Advancement of Teaching

Two difficulties have recurred in the development and use of personal rating scales: The qualities dealt with have been embarrassingly numerous; and the indication of their presence or absence by means of percentages or other quantitative numerals has proved misleading.

The following scale attempts to solve the first and to avoid the second of these difficulties.

We may hope that, ultimately, all formal rating of individuals will depend wholly upon impersonal, objective measurements of capacity and achievement.[1] Meanwhile, ratings based upon the personal, subjective impressions of other individuals will continue to be common, because so easily available, and may be useful as bases for comparison in developing impersonal measures. It is desirable, however, both to reduce, so far as possible, the indefiniteness of such personal estimates and, at the same time, to avoid all appearance of considering them more precise than they can be made.

I

Human nature is so complex and varied that we cannot represent any individual adequately by a million words, in a biography; or a thousand, in an elegy; or a hundred, on a rating scale. It is perhaps, therefore, no more absurd to reduce the number of these merely suggestive symbols to a half-dozen, provided they be "portmanteau" words, packed with meaning and associations.

The half-dozen human qualities that are most commonly compared appear to be the following:

Character.—Suggests physique, appearance, bearing, personality, temperament, disposition, attitude, earnestness, sincerity, integrity, stability, trustworthiness, loyalty, ideals, religion, and similar traits.

Mind.—Suggests open-mindedness, attention, observation, interest, alertness, concentration, accuracy, discrimination, analysis, balance, judgment, reason, intellect, originality, insight, foresight, and the like.

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[1] Intelligence Tests and Their Use. *Twenty-first Yearbook of the National Society for the Study of Education*, 1922.

Force.—Suggests energy, activity, independence, ambition, initiative, enterprise, enthusiasm, practicality, constructiveness, resourcefulness, application, thoroughness, industry, decision, resolution, perseverance, endurance, efficiency, and so on.

Social Qualities.—Good-nature, agreeableness, responsiveness, sympathy, adaptability, cooperation, self-knowledge, common sense, understanding of men, tact, manner, influence, power of organization, leadership and the like.

Knowledge.—Suggests education, information, learning, solidity, ideas, habit of enquiry, experience in learning and applying, and so on.

Technique of any kind, including familiarity with detail, care, precision, order, system, competence, workmanship, cleverness, dexterity, facility, skill, proficiency, speed, expertness, mastery, and the like.

These qualities and the order in which they are arranged are those that were emphasized by nine thousand engineers in 1916 as being of fundamental importance in a professional career.[1] They substantially include those that have been used extensively in grading employees in industries, students in universities, and officers and privates in the United States Army.[2] They are familiar to ordinary observation. Their nature is generally understood, the names by which they are described having come into wide usage through long history. Any attempt to define them with logical precision is foredoomed to failure. The development of personal measurement has been considerably hindered by public misunderstanding of the restricted use of broad terms like "intelligence test" and "mental age." But these qualities may be somewhat definitely suggested by a series of synonyms or analogues, as above, and may be illustrated by lists of persons who appear to possess them in varying degrees, made up from history, biography, fiction, or personal acquaintance.

II

The use of anything so precise as percentages or any other quantitative notation to represent anything so indefinite as impressions of personality has proved to be both unsatisfactory and misleading, a source of misunderstanding and of prejudice against any form of personal rating.[1] Colleges and secondary schools generally have found a system of alphabetical marks adequate for most of their purposes.[2] The advantages of a similar notation for personal ratings are considerable.

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[1] Mann, Charles Riborg: A Study of Engineering Education. *Bull.* No. 11, Carnegie Foundation, 1918, pp. 106ff.

[2] Same, pp. 71ff.

Colleges and schools generally distinguish five grades of ability or accomplishment: Namely, very superior, superior, average, inferior, and very inferior; or exceptional, very good, satisfactory, doubtful, and unsatisfactory or failure, as these grades are represented by about 10, 20, 40, 20, and 10 per cent; or by about 5, 20, 50, 15, and 10 per cent, respectively, of an ordinary human distribution. These grades are ordinarily represented by the letters *A*, *B*, *C*, *D*, and *E* or *F*.[2]

The same five-fold classification is used in the following scale, but the possession of the relative degrees of the qualities rated—from most to least, or best to worst—is indicated by the vowels, in their usual order: *a*, *e*, *i*, *o*, and *u*. This notation is as old and widespread as the customary college notation, and has a special, verbal convenience, indicated below.

When the traits that have been selected for attention—Character, Mind, Force, Social Qualities, Knowledge, and Technique—are each indicated by their initial letters—*C*, *M*, *F*, *S*, *K*, *T*—and the relative amount of each quality observed is indicated by attaching the appropriate vowel to each initial, the entire rating given to an individual may be indicated by a single artificial word. Thus *CAMAFASAKATA* represents the maximum of these qualities, *cumufusukutu* the minimum, *CiMiFiSiKiTi* the average, and *cemafosakiti* an ordinary, irregular human combination. These individual index words may be written entirely in capitals, in mixed capitals and small letters, or entirely in small letters, as may be desired: Small letters are most convenient for cursive writing. Such unnumerical, literal symbols, which may be spoken as well as written, possess a peculiar clarity and convenience and have been used with success in recording physical conditions.[3]

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[1] Yerkes, Robert M.: Psychological Examining in the United States Army. *Memoirs of the National Academy of Science*, Vol. XV, 1921, pp. 97ff.

[2] Minutes of the Tenth and Eleventh Conferences of the National Conference Committee on Standards of Colleges and Secondary Schools.

[3] Nobel, Edmund: "Principles of Professor Pirquet's System of Nutrition." Vienna, 1921. Dr. Clemens Pirquet records the qualities *S*, sanguis, blood; *CR* crassitudo, fat; *T*, turgor, skin tension; and *M*, musculus, muscle. His grades are *i*, excessive; *e*, abundant; *a*, normal; *o*, reduced; *u*, slight. The word Sacratama, the name of his system, thus represents normality.

III

The suggested scale follows:

Rating of..............................By............Date...........					
	a	*e*	*i*	*o*	*u*
Character....................					
Mind......................					
Force......................					
Social Qualities...............					
Knowledge..................					
Technique..................					

The grade of each quality may be indicated on the scale by a check (✓) mark. The scale may be printed on cards or sheets of any desired size. It is printed above in the space of an ordinary 3- by 5-inch library card. Any or all of the synonyms and analogues suggesting the qualities and any other explanatory matter or instructions may be printed with the scale, or on the reverse side, or be printed separately and be supplied with each set of blanks or instructions.

IV

It is not suggested that this simple, literal scale will serve every purpose of every other personal rating scale, and do it better. It is, however, suggested as simpler, sounder, and more flexible than many others, some of which include hundreds of qualities. At the same time, its permutations and combinations make possible the differentiation of fifteen thousand different kinds of individuals,[1] a variety more than adequate for most practical purposes.

The scale is easily scored, recorded, read, and interpreted. It is available for all of the personal use or statistical treatment that is possible with any other scale. It is convenient as an individual record for classification according to maxima, minima, media, or any desired specification. It may be made graphic by lines connecting the check marks opposite the various qualities. Its results can be added together, averaged, or represented by meanes or modes, as is the case with college marks. They can be correlated mathematically, or presented graphically along with any other kind of rating, score, or test.[1]

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[1] $5^6 = 15,625$

In brief, this simple, literal, personal rating scale is suggested as a device of superior soundness and convenience for use whenever it is desired to employ personal estimates of general personal qualities. It can be used independently or in connection with measures of special, technical qualifications for particular types of service. It appears to be peculiarly serviceable for general educational, social, and vocational classifications, such as ratings of students and teachers, self-estimates, vocational guidance, and employment work.

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[1] For purposes of computation it is convenient, as with college marks, to represent the vowels by some non-quantitative numerical symbols, such as 1, 2, 3, 4, 5

RECOMMENDATIONS CONCERNING REPORTS ON HIGH SCHOOLS BY STATE DEPARTMENTS OF EDUCATION

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INTRODUCTION

Enormous masses of educational data are collected annually by state departments of education and published in the form of raw and cold statistics. The shape in which these materials appear frequently suggests that the main object of the departments is formal compliance with state laws which require annual publication of certain bare facts. Relatively little effort is made to refine and interpret the data in such a way as to inform local educational authorities and the general public throughout the state concerning the important facts and conditions which are represented in the figures. The main object of this report is to suggest types of treatment of official data which could be undertaken as a matter of annual routine by any adequately manned and supported state department of education with substantial profit to the educational interests of the state.

The statistical materials, which are used for this purpose, were taken for the most part from official records in the Department of Education of the State of Washington. The six conditions of enrollment and curriculum which were selected for consideration, are listed in the first left-hand column of Table I. They describe the situation during the school year 1919–20 and in the 4-year, accredited public high schools only. The number of teachers and the number of boys and girls were taken from either the High School Statistical Reports or from the Reports of High Schools. The enrollment figures were found in the Educational Directory for 1920–21. The "number of subjects being taken" corresponds roughly to the number of units of work in which classes were organized. The roughness of the correspondence lies in the fact that those courses of study which consisted of less than a full year's work, such as a semester's course in civics, music or mechanical drawing, were also counted as subjects.[1] The classification, new subjects, includes all courses which are vocational in purpose, all fine arts courses and those courses which have been added to the curriculum recently such as, General Science, Spanish, Public Speaking, Economics, etc.

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[1] The data were made available to the writer through the special courtesy of the State High School Inspector, Mr. Edwin Twitmeyer.

The main body of the discussion is divided into three sections each of which describes a method of studying statistical materials which should be employed by state departments of education. In the first section certain aspects of the general secondary school situation in Washington are studied and a description is given of the median school. In section two individual local high schools are discussed and in the third section an illustrative attack on a chronic educational problem is described.

GENERAL DESCRIPTION OF HIGH SCHOOL CONDITIONS

The most salient aspects of the high school situation in Washington, as it is described in Table I, are the preponderant number of small schools (72 per cent) and the remarkably small proportion of medium-sized schools (18 per cent). These aspects of the situation appear none the less striking when considered with the facts of distribution of the high school population. The small number of medium-sized schools enroll only 19 per cent of the total secondary school population, whereas the large number of small schools enroll as much as 23 per cent of the total population. The highly significant fact to which attention is especially directed, is, that of the total number of boys and girls enrolled in Washington secondary schools, almost one-fourth, or more than 8000, enjoy only the comparatively limited educational advantages, which, ordinarily, can be offered in schools of less than 150 pupils.

The distribution of schools and pupils in Washington among the three size groups of schools is explained in large measure by the approximately equal division of the population of the State between a few large cities on the one hand and numerous small communities on the other. In some cases, however, the size of a school is determined more by the failure of the citizens of a small community to appreciate the advantages of consolidation and their consequent unwillingness to merge the interests of the local school with those of other nearby communities. For this reason every opportunity should be taken to explain the extent to which superior educational provisions are possible in the larger school units. One method of describing the advantages of the larger unit is to show how much significant items as the number of teachers, number of subjects being taken, etc., vary with the size of the school. In so far as Washington is concerned the data for this purpose are available in Table I.

TABLE I.—STATISTICAL DESCRIPTION OF 4-YEAR ACCREDITED HIGH SCHOOLS IN THE STATE OF WASHINGTON—SCHOOL YEAR 1919–20

Size of schools[1]........	Total		Small		Medium-sized		Large	
Number of schools.....	180		129		33		18	
	Median	Range	Median	Range	Median	Range	Median	Range
Number of teachers....	5.95	3–91	5.31	3–10	9.18	5–17	40.0	17–91
Enrollment...........	86.44	20–2439	59.88	20–150	195.83	151–436	1109.0	470–2439
Number of subjects being taken.........	23.74	16–67	21.96	16–37	32.5	23–42	49.3	25–67
Percentage high school enrollment is of total enrollment..........	20.49	7–39	19.72	7–39	23.85	13–36	......	12–26
Percentage number of boys is of girls.......	75.33	35–200	75.0	35–200	72.5	50–103	76.5	61–97
Percentage of new subjects...............	41.8	6–61	38.19	6–61	45.68	26–57	51.5	42–58

[1] Small, medium-sized and large indicate enrollments of 20–150, 151–450 and 451 or more students, respectively.

An examination of Table I shows that the median number of teachers, the median enrollment and the median number of subjects being taken are greater in medium-sized schools than in small schools, and greater likewise in large schools than in schools of the medium-sized group. Although this is what was to be expected, the significance of the increased medians is not as readily appreciated as the fact itself. The larger schools employ many more teachers than small schools. Numerous branches of subject matter can be taught by specialists in those fields. Students can be coached for dramatics, debate, athletics, etc., by teachers who have been trained for that particular work. The number of subjects from which a student's course of study may be selected is greater by from 50 to 100 per cent. Recognition of individual differences in interest and aptitude is thus made practicable and classification of pupils according to ability is possible.

The 21.96 median number of subjects being taken in small schools represents very little more than the minimum of 16 units which is necessary for accreditation. A larger offering scarcely could be expected with so limited a staff of teachers. Some of the small schools offer precisely the required minimum and nothing more—a situation in which all students take everything, and boys and girls alike follow the same course of study.

The presence of a large number of pupils in one organization entails additional advantages. Many kinds of student activity can be developed and opportunity given for constant practice in self-government. Social experience in large groups can be accumulated. For effective participation in the complex life of modern populous communities these types of training are an indespensable preparation.

The opportunity to pursue special vocational, civic, or cultural interests, however, is measured more directly by the percentage of new subjects which the curriculum offers. In Table I the median percentage of new subjects increases from 38.19 per cent in small schools, to 45.68 per cent in medium-sized schools and again to 51.5 per cent in large schools. The actual increase in variety of opportunity is appreciably greater than the increase in percentages indicates, since the percentages are to be calculated on the number of subjects being taken, which increases from the small- to large-size groups of schools.

The ability to attract and hold a large percentage of the children of the community for secondary education is generally recognized as one of the most important features of a successful high school. This condition is represented in Table I by the percentage which high school enrollment is of total school enrollment and the percentage which the number of boys is of the number of girls. The former percentage could not be calculated for individual high schools in large cities where more than one high school is found; nor for union high schools, since the total school enrollments of union high school districts could not be obtained. The high school enrollment percentage is influenced to some extent by the fact that high schools frequently enroll students whose parents reside outside of the local high school district. Such schools appear to hold a larger percentage of the children of their local districts than they actually do hold. The opportunity to attract students from outside the district, however, is open to practically all high schools. It, therefore, appears to be legitimate to compare the percentages of high school enrollment of the several size groups.

An examination of the table shows that the medium-sized schools in Washington are decidedly more successful than the small schools in holding the youth for further education. The medium-size group appear, also, to have an advantage over the large schools, for in none of the four cities, where more than one high school is found, does the percentage of high school enrollment exceed the median 23.85. To some extent this apparent short-coming of the large schools may be accounted for by the fact that the percentage of high school enrollment in a city, where the total number of children is very large, is increased relatively little by the enrollment of even hundreds of students from outside the city. The lure of employment also, opportunity for which is greater in cities, may account in part for the poorer standing of the large schools.

The position of the large schools in respect to holding power over boys, however, is slightly higher than that of either other group. This advantage is due for the most part probably to the greater program of extra-curricular activities and the marked vocational bias of the curriculum in large schools.

A summarizing survey of the points to which attention has been called above clearly reveals the fact that the weakest feature of the state high school situation is the small school. Boys and girls who attend small high schools are offered a comparatively meager secondary education. In the larger schools decidedly superior educational advantages are enjoyed. This inequality of educational opportunity assumes very serious proportions when it is recalled that both the percentage of small schools and the proportion of children enrolled in them are large.

In view of these circumstances it is not surprising that the Washington State Department of Education encourages consolidation of small school districts and the formation of union high schools. The conditions which have been described above warrant a vigorous insistence on this policy. A recent comparison of Washington high schools with those of California suggests that probably very large possibilities of further progress in this direction lie before the high schools of Washington.[1]

COMPARISON OF LOCAL SCHOOLS WITH THE MEDIAN SCHOOL

The first section of this report was concerned with the high school situation of the State as a whole and with conditions in the average school. The present section presents additional data which will show how the officers of local schools may be assisted by the state department of education in their efforts to study their schools in the light of the general state-wide situation. For this purpose data concerning the same conditions of enrollment and curriculum, which were discussed above, were procured for each one of the almost 200 four-year accredited high schools in the state. The space available for this report does not permit the inclusion of data for all of these schools. A number sufficient for purposes of illustration only are presented in Table II. The schools are listed according to size of enrollment in order to facilitate comparison of any individual school with others of similar size. Since medians have been computed for each of the three size-groups of schools in Table I, any individual school may be compared with the median of its own size group.

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[1] Proctor, W. M.: Union versus Single District High Schools. *Educational Administration and Supervision*, Vol. IV, No. 3, March, 1918, pp. 146–54.

The possibilities of comparison may be illustrated by reference to one of the schools in the list. The Tekoa High School has an enrollment of 120 students which is 24 per cent of the community's total school enrollment. The number of boys is 80 per cent of the number of girls. Slightly more than one half of the subjects of the curriculum are new and the total number of subjects being taken is 37. In each of these items the standing of the Tekoa High School is superior to the median Washington school of the same size group. In so far as percentage of high school enrollment and percentage of boys are concerned, however, the good standing of Tekoa is exceeded by schools in several communities of the same size group.

The officers of any other individual school can study its comparative standing in the same way. The differences in conditions which are found in communities of the same size, in some instances assume enormous proportions. As was pointed out above such differences indicate serious inequalities of educational opportunity. The educational authorities of Stanwood have cause for gratification in the fact that their high school enrolls a very high proportion (32 per cent) of the total scholastic population. On the other hand the authorities at Raymond have reason for grave concern in the fact that so small a proportion (12 per cent) of the scholastic population is found in the high school. At Marysville the number of boys in high schools exceeds the number of girls. At Garfield on the other hand the number of boys barely exceeds one half of the number of girls.

The reader should be cautioned at this point against attaching too great significance to the figures of enrollment for the smallest schools. In very small communities the going or coming of one large family with several boys of high school age would cause extensive fluctuation of the enrollment figures. In one such community, Edwall, a very exceptional conditions obtains—the number of boys in high school is twice as large as the number of girls.

An examination of the columns which describe curricular conditions, discloses further significant differences between communities of approximately the same size. Marysville, for instance, has organized classes in 34 subjects, whereas at Selah only 22 subjects are being taken. The comparatively rich curriculum at Marysville is thoroughly diversified by the inclusion of newer subjects to the extent of 47 per cent of the total offering. The small high school at Washtuca, although it enrolls only 35 pupils has organized classes in 26 subjects, 42 per cent of which are classified as new. In contrast with this condition other small schools, of approximately the same size, offer merely the minimum 16 subjects of which less than 1 in 5 is classified as new.

To a large extent the differences in educational opportunity, which have been discussed above, are due to differences in social and economic conditions in the several communities. In Washington the population of certain communities is selected almost entirely by dominant industries such as mining or lumbering. Some districts possess relatively enormous taxable values, others are very poor. In still others a large proportion of the population consists of recently arrived immigrants who have not yet begun to think of secondary education for their children. A few communities are interested in college preparatory courses only and expect to send practically all of their children to college. In some districts a strong educational sentiment prevails; in others little is done for the children beyond what is required by law. All of those conditions and others too numerous for mention here are reflected in the local schools.

From time to time the educational policies of a community need to be modified or new ones formed. A statistical description of school conditions, such as that which is presented above, enables the responsible authorities to locate the strong and weak points of their situation with certainty. A few of the more important questions of educational policy must be placed before the voters of the community for decision. The average voter is very susceptible to comparisons of local achievements with the achievements of other communities. Increasing numbers of the people, when forced to choose between public policies, are demanding statistical materials.

These circumstances point out an important avenue of service for properly manned and supported divisions of research in state departments of education. Local high school officials in the smaller communities have not always had opportunity to acquire the professional training which is necessary for the collection and classification of statistical data. A large amount of time and certain facilities for handling the materials are likewise necessary. These can be provided more efficiently by the central state organization.

TABLE II.—CERTAIN ENROLLMENT AND CURRICULUM CONDITIONS OF 4-YEAR ACCREDITED HIGH SCHOOLS IN THE STATE OF WASHINGTON—SCHOOL YEAR 1919–20

Schools	Enrollment			Subjects being taken	
	Of high schools	Percentage high school enrollment is of total	Percentage number of boys is of girls	Percentage of new	Total number of
Edwall	34	33	200	24	17
Washtuca	35	18	162	42	26
Ephrata	77	27	68	12	16
Selah	103	15	88	27	22
Garfield	104	26	58	38	21
Marysville	119	17	102	47	34
Tekoa	120	24	80	51	37
Raymond	132	12	79	50	28
Stanwood	133	32	60	46	28
Port Angeles	216	22	99	45	31
Hoquium	303	15	87	43	28
Yakima	772	17	61	44	41

By this agency the statistical materials which describe the most important school conditions could be arranged for publication in the annual reports. The significance of the conditions which are reported should be discussed and special attention directed to outstanding features. A large amount of data should be presented in terms of the individual high school. With such facilities at their disposal the local authorities would be enabled to study the comparative standing of their schools at regular intervals.

ATTACKING CHRONIC EDUCATIONAL PROBLEMS

A third type of service which is peculiarly appropriate to state departments of education will be described in the remaining paragraphs of this report. The school world is always interested in a number of chronic educational problems. Some of the problems spring from the determination of the nation finally to produce an educational system which will prove more adequate for the world's largest democracy. In considerable measure this hope rests upon the assumption that continually increasing proportions of the youth will be held for the advanced training of the secondary school. Educationists and the people in general believe that an expanded curriculum will produce this effect. Has it in fact done so?

In more definite terms the question may be stated in the form of a problem as follows: To what extent is the holding power of a school system determined by the richness and variety of the curricular offering of the high school?

The far reaching significance of this problem demands that data for solving it be collected on a broad scale. A large number of schools and broad stretches of territory are included within the jurisdiction of almost all of the state departments of education. The data which are reported annually from the schools of almost any state, therefore, would provide sufficient material for a promising attack on such a problem.

If the hopes of the curriculum expansionists are realized a rich and varied curriculum would be accompanied usually by a high percentage of total enrollment in the high school and probably also by a high percentage of boys. In so far as the schools of Washington during 1919–20 are concerned the facts in the case are presented in Table III. In computing the correlations all union high schools and schools in cities, which support more than one high school, were necessarily

TABLE III.—CORRELATION OF PERSISTENCE[1] WITH CERTAIN ENROLLMENT AND CURRICULUM CONDITIONS

Condition	Pearson coefficient of correlation, r
Number of teachers	0.075
Enrollment in high school	0.091
Percentage number of boys is of girls	0.164
Number of subjects being taken	0.164
Percentage of new subjects	0.100

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[1] Persistence is defined as the percentage which high school enrollment is of total enrollment.

omitted. Four additional schools were omitted for convenience in computing the correlation with number of teachers. In this case the number of schools included was 150.

Examination of the table shows that the correlation between persistence in high school and the number of subjects being taken is positive but small. The correlation with percentage of new subjects is positive likewise, but even less in magnitude. With the percentage which the number of boys is of the number of girls the correlation again is positive but of unconvincing magnitude. It would appear that the rich and varied curriculum does tend to hold somewhat larger numbers of pupils in the high school. It would appear, further, that the strong curriculum may operate to increase the attendance of boys in larger proportion than girls.

The correlations with number of teachers and enrollment are 0.075 and 0.091 respectively. These figures while positive are, nevertheless, very small. They suggest that to some extent greater persistence is found in larger communities. Such a conclusion is in harmony with the figures which are found in the fourth row of Table I. It should be noted also in this connection that, since stronger curriculums are offered ordinarily in larger communities, the effect of these correlations is to reinforce the interpretations which are included in the paragraph immediately above.

The smallness of all of the correlations and the consequent lack of assurance, with which they can be interpreted, are sufficient evidence that the curriculum by itself and alone does not exercise a predominant influence over persistence in school. Its influence undoubtedly is great. It would be idle to imagine that the activities with which pupils are engaged from two-thirds to five-sixths of their time (that is, the curriculum) are not influential in determining whether they are to continue in school. The above paragraphs, however, point out a very significant conclusion: The curriculum, powerful though it be, is, none the less, only one among several important factors in determining persistence.

A list of the most influential factors would certainly include the spirit of the school and the program of extra-curricular activities. Furthermore the strongest possible curriculum would have serious difficulty in attracting many children from families which had thought little or nothing previously of higher education. It is not necessary to complete the list of factors. The significance of the discussion for school authorities is unmistakably clear. The community, which proposes to increase the proportion of its youth in the high school, cannot achieve its purpose by the simple expedient of adding subjects to the curriculum. A successful program must include adequate recognition of all of the more important factors in the make-up of a modern school.

The above paragraphs are not offered as a thorough treatment of the problem which was raised at the beginning of this section of the report. The primary purpose is to suggest sources of data which can be utilized for far more conclusive attacks on this problem and on many others of equal importance. Great quantities of such data lie dust covered in the vaults of state departments of education. These materials represent a tremendous burden of hard labor by the entire educational forces of the state as the reports pass from classroom teachers, principals and superintendents to the central state officers. There is no lack of men competent to study such data. The whole educational world is alive with serious and soluable problems. The opportunity has come to state departments of education to follow the path of progress which has been marked out by advancing industry and convert what is now an enormous waste of valuable educational material into useful by-product.

THE EQUIPMENT OF STATE NORMAL SCHOOL CRITIC TEACHERS

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An adequate study of the preparation and experience of critic teachers in state normal schools, would be of great worth because of the singular importance of the work assigned to them in the education of teachers. The many-sided suggestive influence, both of example and of expressed ideals operating through personal contact upon novices with minds set to learn the intricacies of the successful teaching act is well known; and, moreover, normal school graduates associate most closely and, in the present organization, *last* of all with the critic teachers. One can almost generalize by saying that, *as is the critic, so will be the first school of the new graduate.* At least it is safe to say that any level of efficiency among critic teachers will very probably be largely reflected in the early teaching done by the graduates of state normal schools. Probably inadequacy of the critic teacher will produce on the whole inefficiency. While the student directed by a critic who has had excellent training and experience will, other factors being even fairly equal, get an earlier start and on a higher level of teaching skill.

As a preliminary suggestion toward the more exhaustive study needed of the status of this teacher-training group with regard to preparation and experience, the following brief investigation is presented. It is intended rather to present an attitude and perhaps one method of procedure than to give any reliable body of evidence.

Nine state normal schools were taken at random, including those which first came to hand in an alphabetical filing of catalogs and whose faculty lists gave definite information about preparation and experience. As many catalogs were used as were needed to supply a list of 50 critic teachers, including, of course, all the critic teachers in each of the schools examined.

A very good geographical distribution resulted. One school is in the upper Mississippi valley; one in a border state; one in the black belt of the south; one in northern and one in southern California; two in the corn belt of the middle Mississippi region; one on the western plains; and one near the mouth of the Mississippi river. The normal schools of the far east are not represented.

The schools studied include all existing types of state normal schools, those doing a great deal of secondary work, those enrolling first and second year college students only, those with 4-year teachers' college curricula, those with widely differentiated curricula, and those with but the traditional division into "academic" and "professional" work.

The following table gives the facts as found in the case of these 50 critic teachers in the nine state normal schools used. The table provides material for a tentative answer to the following questions:

Preparation.

1. What normal school work did they have?
2. What college work?
3. What college degree was earned?
4. What graduate work did they do?
5. What degree resulted therefrom?

Experience.

1. What teaching experience did they have?
2. What supervisory experience?

The number of years involved in each item of preparation and experience is indicated, wherever known, by an Arabic numeral. It is assumed that the standard time requirement for earning the bachelor's and the master's degrees obtains in each case where the degrees were achieved.

Normal School Attendance.—Twenty-nine of these teachers finished a full 2-year normal school course. The other types of "normal" preparation, where known, have to do with kindergarten colleges, "normal" departments of private colleges, and private "colleges" in the south. In the 10 cases where the items of this column are questioned it is probable that a normal school was attended for a part, if not for all, of the 2-year course. If these be added, the total becomes 39, or 78 per cent, of the 50 critic teachers who came from normal schools.

PREPARATION AND EXPERIENCE OF FIFTY CRITIC TEACHERS IN NINE STATE NORMAL SCHOOLS

	Types of preparation and degrees				Types and amount of experience	
Individual teachers	Amount of normal school attendance	Amount of college attendance	Bachelor's degree	Amount and results of university attendance and degrees	Years and levels of teaching	Years and levels of supervision
	School A					
1	Kindergarten College	1 summer	0	0	9, kindergarten	2, kindergarten
2	Normal department College	0	0	0	8, grade one	2, primary (1, 2)
3	2 years	....	Ph. B.	1, summer	5, grade three	3, primary (3, 4)
4	2 years	1 summer	B. S.	"several years"	4, grades, high school	5, high school, intermediate grades
5	2 years	0	0	0	10, grade eight	17, upper grades
	School B					
6	2 years	"college of music"	0	0	7, high school, grades	2, rural
7	2 years	"some time"	0	0	1, grades	3, primary (3 and 4)
8	private "college" graduate	"student"	0	0	?, high school	1, upper grades (5 and 6)
9	0	....	A. B.	2, summers	?, high school, grades	1, upper grades (7 and 8)
10	0	....	A. B.	....	5, high school	5, high school
11	2 years	"student"	0	0	6, primary	8, primary (1 and 2)
12	2 years	"student"	0	0	3, high school	5, high school
	School C					
13	0	"Diploma in supervision"	0	0	10, public and private schools	4, head critic
	School D					
14	2 years	....	Ph. B.	?	8, high school, grades	9, supervisor of training
	School E					
15	2 years	....	Ph. B.	....	?, grades	2, primary
	School F					
16	2 years	1 summer	0	0	2, grades	6, "grades"
17	3 years	? summer	0	0	14, grades	10, "grades"
18	2 years	0	0	0	3, grades	1, rural
19	2 years	1 year ?	0	0	10, grades, 1, primary	3, "grades"
20	3 years	2 summers	....	....	16 grades	9, "grades"
21	2 years	....	A. B.	A. M.	6, grades	6, "grades"

	Types of preparation and degrees				Types and amount of experience	
Individual teachers	Amount of normal school attendance	Amount of college attendance	Bachelor's degree	Amount and results of university attendance and degrees	Years and levels of teaching	Years and levels of supervision
	School G					
22	2 years	?	0	0	5, grade principal	18, primary
23	2 years	0	B. S.	A. M.	?, kindergarten	5, kindergarten
24	0	1 year 1 summer	0	0	7, kindergarten	7, kindergarten
25	0	2 quarters	B. Di.	0	9, primary	7, primary
26	2 years	1 summer	A. B.	0	0	5, domestic science
27	2 years	....	A. B.	A. M.	10, high school	9, English
28	0	....	A. B.	A. M.	7, "grades," high school	3, high school
29	0	1 year	B. Di.	0	6, primary	3, primary
30	?	....	Ph. B.	0	6, primary	3, primary
31	2 years	....	Ph. B.	1 quarter	18, "grades," high school	3, high school
32	?	1 summer	0	0	11, primary	2, primary
33	?	....	A. B.	0	2, domestic science	3, domestic science
34	?	....	B. Di.	A. M.	1, junior high school	3, ?
35	?	....	A. B.	M. Di.	0	4, high school
36	?	....	A. B.	M. Di.	3, high school	6, "grades"
37	?	1 summer	0	0	16, "grades"	5, "grades"
38	2 years	1 summer	0	0	14, "grades"	3, "grades"
39	?	?	B. S.	M. Di.	11, primary	3, primary
	School H					
40	2 years	3 summers	0	0	4, "grades"	5, "grades"
41	2 years	....	Ph. B.	0	5, "grades," high school	6, "grades"
42	?	0	0	0	7, primary	9, primary
43	2 years	....	A. B.	0	1, kindergarten	4, kindergarten
44	2 years	....	B. S.	0	9, high school	8, upper grades
45	?	2 summers	0	0	7, high school	3, upper grades
46	2 years	5 summers	0	0	11, primary	4, grade four
47	2 years	1 summer	0	0	4, primary	4, primary
	School I					
48	2 years	0	0	0	13, primary	11, primary
49	2 years	....	A. B.	0	19, primary	6, primary
50	0	....	A. B.	A. M.	3, primary	1, primary

College Attendance.—This has to do with college attendance which did not result in a degree. Twelve attended summer sessions of colleges—seven for 1 summer, two for 2 summers, one for 3 summers, and one for 5 summers. Nine others had some college attendance to their credit, ranging from the indefinite time unit expressed as "student," through 2 quarters to more than 3 years. In all, 24 had some experience with college work, but did not complete their 4-year course.

Bachelors' Degrees Gained.—Twelve have the degree of A.B., six that of Ph.B., four B.S., and three that of B.Di., the last granted by a teachers' college in the minddle west. Twenty-five, then, have the bachelor's degree. This is 50 per cent of all.

Graduate Work.—Two did graduate work in summer schools, one for two summers. Three report a rather indefinite time unit of attendance in a graduate school. Six have the degree of A.M., and three that of M.Di., the latter granted by a teachers' college in the middle west.

The dates in the academic records of these critic teachers show that not all preparation preceded experience. There was a great deal of studying while teaching, either during summer sessions or during intervals of teaching. This is particularly true of the higher work.

Teaching Experience.—The average teaching experience of the 50 critic teachers, including two who had had no teaching experience before undertaking their supervisory work and one with 19 years of experience in the grades, was 7.14 years. Four of them had been kindergarten teachers, 16 had taught in primary grades, 11 in high schools, 3 in upper grades, while 19 just taught in the "grades." One was a grade principal, and 1 a domestic science teacher. This experience was, almost without exception, in public schools.

Supervisory Experience.—Supervisory experience is, of course, a big item in determining the present worth of all of critic teachers. Therefore, this experience up to the time that the record is taken is included in this study. Very few of the teachers have been in any other supervisory position than that which they now hold, but when this is true the total number of years that a position of this kind has been held has been used. The average supervisory experience of the 50 teachers thus appears to be 5.32 years. Four have been kindergarten supervisors; 16 supervisors in primary departments; 4 in the upper grades; 4 in high school work; 3 in the intermediate grades; 2 in rural departments; and 12 have just been "grade" supervisors. One is "head critic," and 1 is called "supervisor of training."

Relation between Experience and Supervisory Work.—As one would expect, the transition in nearly every case was from teaching experience of a certain kind into supervisory positions in connection with similar types of work. That is, most of the primary teachers became primary supervisors of student teachers in state normal schools, and nearly all of the "grade" teachers later supervised "grade" departments in state normal schools. There are four cases in which former high school teachers without any grade experience whatever, took charge of grade supervision in state normal schools. A number of these teachers have been high school principals.

What is a State Normal School Critic?—If the normal schools examined are representative, then we may fairly say that the typical state normal critic teacher (1) is a graduate of a full 2-year state normal school course, (2) has had some college work, (3) has taught about 7 years in the grades of the public schools before undertaking supervisory work, and (4) has for about 5 years been doing normal school supervisory work of a grade similar to that in which she gained her previous experience. It would be useful for each normal school to examine its own situation in the light of this tentative standard of practice.

Equipment.—This, then, is the tentative answer, to the question. What equipment does the critic teacher have who is supervising the practice teaching of state normal school students? Her equipment consists of items of knowledge and habit resulting from a very short course of instruction and supervised teaching in a state normal school followed by a number of years of teaching in the usual public school situation where, as her activities are carried on under a rather low level of supervisory assistance, learning is largely of the trial and error sort. There is, of course, in addition to this a certain increase in power of leadership resulting from growth in personality and in such skill in social contacts as comes to teachers with maturity. And as an item of equipment for the work which she will be able to do for the future good of young teachers this is no doubt quite valuable. But a 2 year, or shorter, contact with high school graduates in the usual state normal school situation can at best, probably give only a directing impulse which may result in efficiency after a period of practice later on.

One of the most important present points of attack in the realm of teacher-training should be with this period of practice. Beyond this, if organization of extension activities and greater efficiency in supervision in local systems could be effected, a larger number of state normal school students would after graduation reach more quickly higher levels of teaching power, many would be saved from failure, and some would be prevented from continuing in an occupation in which they will never succeed.

What the Equipment Should be.—As even a tentative study of conditions should lead to some suggestions for improvement, the following list of "minimum essentials" is proposed for the critic's education:

1. Completion of a secondary course in a 4-year school or in a 6-year junior-senior high school.
2. Two years in a junior college followed by the last 2 years of a teachers' college course or the last 2 years in a university with a college of education offering courses specifically for the preparation of supervisors of this kind, *or* 4 years in a state teacher's college.
3. At the close of 4 years of such preparation in an institution of college grade, a good score in teaching skill, a score equivalent to "Very Good" or "Excellent" on a card such as Sprague's score card for rating student teaching.[1]
4. Sufficient experience in teaching in a public school to consolidate the gains from normal school student-teaching and from investigation of principles in a higher institution into a body of flexibly usable standards. Promotion to a "critic" position would be in order at this point.
5. A growing attitude and habit established by this time so that every opportunity offered for further study and improvement while in service will be embraced and *opportunities made when none offer.* The master's degree might well be expected eventually.
6. Leave of absence taken at the proper time for a year or more to work in residence at a university *toward* a higher degree.

An equipment resulting from this program would result in a type of critic teacher at point "4" above, more efficient than the average critic in the nine state normal schools studied. And a continuation of growth in service might reasonably be expected to result in ability surpassing that of any persons found in the above list of 50, with the exception perhaps of teacher number twenty-seven, so far as ability may be judged on the basis of facts obtainable from state normal school catalogs.

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[1] Sprague, G. A.: A Score Card for Rating Student Teachers in Training and Practice. *Pedagogical Seminary*, March, 1917, pp. 72–80.

SOME CONDITIONS OF IMPROVEMENT IN TEACHER-TRAINING

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Any person who conducts a bureau of educational tests and measurements is almost certain to come face to face with the problem of teacher-training. When tests are given, certain weaknesses on the part of the pupils are disclosed which must be taken care of. The only alternative is the failure of the school to perform its function so far as the retarded pupils are concerned. A bureau of educational tests and measurements is therefore called upon to serve a much wider purpose than that of diagnosis alone. It must undertake the problem of remedial and follow-up work. Teachers must be trained to do diagnosing for themselves and must be taught how to provide and apply the appropriate remedy in each case. To effect such a program is of course a tremendous task. Help from any and every source is needed but it is the belief of the writer that the normal school should be the chief agency to contribute relief.

The nature of the help that is needed is of sufficient importance to merit presentation in some detail.

It is partly a matter of gaining more accurate information as to the needs of the pupils, partly a matter of diagnosis, but mostly a task of remedying that which is weak. In still more specific terms we need to know the answers to questions like the following:

Why do children fail to learn what is taught them? Are the causes of wrong responses entirely different for each child, or are there certain factors operating at all times and over broad areas to produce wrong reactions on the part of the learner?

If the latter is the case (and it is in such subjects as language, algebra, and arithmetic) what are the most important types of failure and what causes them?

When children over wide areas in all of the grades of the elementary school say that $5 + 1 = 5$, that $60 - 35 = 35$, that $8 \times 0 = 8$, certainly there are some factors which are widespread in their operation cause the child to respond wrongly. What are these factors and how may they be removed?

Even if the necessary remedial devices are in the hands of the teacher, how can she know when to use each particular one? Teachers often see the errors of the children but fail to locate the cause of the trouble. For example, when third-grade pupils are asked to solve the problem, "If we learn to spell two new words a day in our school, how many new words shall we learn in eight days," by far the most frequent wrong answer is ten. When the attention of teachers is called to this situation, the greater number of them have no idea as to what is causing the trouble.

It follows therefore that someone somewhere must teach teachers how to locate the pitfalls into which the children are likely to stumble, how to identify each pitfall, and how to remove it. This sort of activity is certainly an essential part of teacher training.

A similar course of reasoning applies to the normal schools themselves. Each institution should know the most important causes of failure on the part of its former students. It is one of the functions of teacher-training institutions to guide the young teacher around the danger spots in the profession. When teachers who have had normal-school training fail to "make good," it is the chief concern of the institution which trained them to find the cause of their failure and to keep the mistake from happening again. The best chance for the improvement of teacher-training lies in this direction. To realize such improvement at least two fundamental and essential conditions must be met: (1) The members of the faculty must know to what extent and why their pupils fail; and (2) they must have the opportunity to supply constructive remedial measures.

The argument back of the first condition is as follows:

Progress occurs only as the result of a breakdown in our customary ways of doing things. The nature of the breakdown must be at least partially understood. When we become conscious of a lack of adjustment in our experience, we search for a remedy—a solution to our problem. When a solution is found which is in a measure satisfactory, we use it until we can discover just wherein it fails. When this is known, it, in turn, constitutes a new problem for which we discover a new solution which will again be somewhat unsatisfactory and will in turn give rise to further problems, and so on. In this way and in this way alone, is progress attained.

Let us see how this principle applies to normal schools as they are now conducted. It is assumed here that the problem of the normal schools is to train teachers. Out of the successes and failures of teachers in the past, a body of subject matter has been built up which now constitutes a solution to the teacher-training problem. The nature of this content is well known by all or nearly all of those who teach in normal schools. The solution as embodied in the content of normal-school instruction is valid in so far as it enables young people to succeed as teachers. But it is common knowledge that teachers do not succeed as well as they might and that some normal-school graduates fail utterly. Now why is this? Do the normal-school people know?

If one should walk into the presence of a normal-school faculty and ask for definite information concerning the causes of the failures on the part of their graduates and the frequency of such, it would probably cause some embarrassment in every institution. On the other hand, if one goes to a business concern and asks the causes of the failure of its output to meet the needs of their customers, one gets a much more definite reply. An automobile manufacturer generally knows in great detail the strength and weaknesses of the car which he makes. Where does he get his information? From the people who have bought his cars? Yes, in part; but the best source of his knowledge lies in the fact that he and his employees *go out and watch the car in action.* The manufacturer does not want his foremen and managers to stay within the four walls of the factory all of the time. He knows that his only hope of *improving* his product lies in being able to know definitely wherein it fails to perform as it should.

This same principle surely holds good in relation to the training of teachers. The hope for improvement lies in making it possible for those who teach teachers to see how well or how poorly their output performs. The observance of the principle is fundamental and essential to the improvement of the professional training of teachers.

In many institutions it is customary to ask for a report from the supervisors in the field concerning the work of the normal school product. This is worth while but neither this nor the inspection by any one member of the faculty is at all adequate. Either of these may be used as a preliminary report, but the essential thing is to get the member or members of the normal-school faculty who are most responsible for the failure of the young teacher out for a personal visit with her—a visit which will last long enough for a careful inspection.

No problem connected with the training of teachers is more pressing than this. The advantages to be derived are as follows:

1. The normal-school faculty could then do its work intelligently rather than blindly. A definite knowledge of previous breakdowns is the best means of seeing that they do not happen again.

2. The work of the teacher in the normal school would no longer be a monotonous grind—a continual diluting and rehashing of the thoughts of others. The environment of the normal-school teacher would no longer be a deadly one professionally. On the contrary, it would become imbued with life from actual contact with the needs of the great world outside. Teaching in a normal school under present conditions is notoriously dangerous to professional life because true professional life is essentially professional growth. But how is one to grow when one is kept continually in one spot at the same round of duties all of the time? Growth is conditioned upon environment and upon an opportunity to do constructive work. Talented people must often either get out of normal schools or suffer their talent to evaporate. Talent which does not express itself must inevitably shrivel and die. It can not survive in a deadly environment. Under present conditions the normal-school teacher is deprived of the stimulation which is essential to professional growth, and it is hard to see how he can avoid professional atrophy. It is fatal to isolate the members of a normal-school faculty from those whom they serve.

The second condition of improvement is also lacking. Professional growth takes place when and only when there is a chance to contribute in a constructive way to a social need or problem which has been clearly recognized. The educational test and measurement movement of the past decade has provided a fairly effective means of diagnosis. Tests have been given far and wide. There are better opportunities to sense social needs now than we have ever had before. Remedial measures are needed to meet special disabilities. Enriched courses of study are needed to conserve and train talent which is definitely known to exist in bright children. Without exercise this talent, which is the most precious asset of the nation, will wither away through disuse and those who should become our geniuses will degenerate into mediocrity or worse. It is the belief of the writer that the normal schools should be the headquarters to which field workers may go in order to get constructive suggestions for the solution of these new problems. To provide new supplementary exercises to meet known needs would require the time of teachers, many of whom are overloaded already, but constructive activity is an essential of professional growth. If teachers are too busy to do work of this sort, their load should be lightened. Most normal-school teachers go to a university occasionally. Many of them return to their positions full of energy and inspiration—alive with new ideas to pass on to their pupils.

When school starts and routine duties crowd in, the teacher soon finds himself a mere mediator between the pupil and the ideas of the textbook writer. As time goes on, the enthusiasm wanes, the new ideas which were originally so stimulating begin to lose their warmth and nothing but a frame work of thought—a cold dry outline—is left. Then it is necessary to return to the university again to get "recharged." But where do the university people get their supply? How do they keep alive professionally? The answer to the question undoubtedly lies in large measure in the fact that they are creating, contributing to the sum total of human knowledge. Growth is, therefore, conditioned upon creative activity. We must create or perish professionally.

I have mentioned two conditions that are indispensable to the professional welfare of those who teach teachers: (1) Direct contact with the problems of the field; and (2) constructive activity in the solution of those problems. Both of these prerequisites are obtainable in a county normal school such as exists in many of the counties of Wisconsin. In spite of the fact that the number of students is small and that the faculty consists of only a few teachers—generally three or four—the professional spirit is splendid. The geographical area is so small that the instructors can have actual contact with the problems of the field. They visit their students of the preceding year and see wherein they are failing or succeeding. They know the needs and have a definite and potent incentive to do something to relieve them. This engenders an interest and enthusiasm on the part of the teachers which inspires the students. In spite of their youth and inexperience the girls from the county normal schools go out to teach with a zeal and professional spirit which is all but unknown among the alumni of State normal schools. This is not to say that the county institutions are perfect or that they are adequate to meet all of the needs for trained teachers. They are able, however, to meet two fundamental conditions of improvement which are not being met by the State institutions.

The chief objection which is offered to the suggestions presented above is the matter of expense. Many of the State institutions serve large geographic areas and more money would be required to cover traveling expenses. Furthermore, it would be necessary to lighten the normal school teacher's load in order to provide time for such constructive activity as the writing of books. It would also be difficult to take care of the normal-school classes when members of the faculty are in the field. Many schools are eking out a miserable existence, as it is, on the meager appropriations made by State legislatures. Then, too, some of the faculty members have been kept in so long that they are professionally dead and could not respond to the stimulus of the field, be it never so strong.

These are all valid objections, but none of them is insuperable. Normal-school presidents in the long run seldom fail to get what they want if they want it hard enough. If all of the educational forces would align themselves and work together for more appropriations to be used for improvement which can be guaranteed, the necessary funds would be forthcoming. Then if any faculty members proved to be so dead that they could not profit by their advantages, there would be proof sufficient to show that such persons did not merit positions as teachers in institutions which are fundamental to the welfare of the nation. Such persons should be pensioned or provided for in some other manner. The faculties of normal schools would then consist of people who are really alive, and—that which is best of all—the road would be open for the improvement and growth of the institution and all who are connected with it.

THE NORMAL SCHOOL DEAN IN THE UNITED STATES[1]

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Since the inauguration of the teacher-training idea in America the profession and the general public have shown an increasing interest in the institutions that have to do with developing instructors of the youth of the nation. Along with this increasing interest have come studies of costs, resources, curricula, enrollment, requirements for entrance, and teaching staffs. Detailed studies of the characteristic duties and equipment of those members of the faculty who occupy the positions affording greatest opportunity to influence the character of the school are needed. Among such positions is that of the dean of instruction.

As schools for the professional education of teachers multiply in number and grow in patronage and in influence, governing boards should be desirous of selecting fair-minded, well-trained, thoroughgoing men to act as deans of instruction. The present study represents an attempt to ascertain for the school year 1920–21 the kinds of schools that maintain deans; their size, sectional location, length of curricula, etc., but more particularly attempts an external study of the man himself: His age, educational preparation, length of service, salary, duties, and subjects taught.

To secure this information a questionnaire was mailed to the 245 normal schools of the United States. That there might be no need for explanations or defense of "sampling" every school was addressed. The replies were most generous. One hundred sixty-eight responses came from 39 states. The percentage was 68.57.

With reference to whether they employ deans normal schools fall into three groups: (1) Those schools that employ no deans, of which there were 76; (2) those with only deans of men or deans of women, of which there were 61; (3) those with *deans of instruction*, of which there were 31.

As the first two groups are not of vital interest to the study only meager attention has been given to them.

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[1] Report on a "Field Problem" for George Peabody College for Teachers, Dr. Shelton Phelps, Instructor.

The main facts in regard to salaries, the enrollment of the school, the length of its curriculum, wage of the deans, their tenure and the like are summarized for each group.

1. *Schools That Do Not Employ Any Deans.*—Of the 76 that belong to this group, 36 replies contain no information of importance for tabulation, leaving only 40 for actual working.

Sixteen of these schools reported the highest salary paid the head of a department. The median is $2700, the middle 50 per cent included between $3060 and $2500, and the range is from $4000 to $1400.

The study of the curricula offered in this group shows that the median, mode, and middle 50 per cent fall in the 2-year class. One possible explanation for the preponderance of the schools offering only 2 years of work beyond high school graduation is that many small schools are included and perhaps have not felt the demand or been able to offer a curriculum extending over a longer period.

In this group 30 schools report their enrollment. The largest is 530, 15 men and 515 women; and the smallest shows 26 women and 4 men. Every school except one is coeducational; while the most striking feature is that there are 6 "coeducational" normal schools without even 1 male student! The number of men students runs from 0 to 41 per cent. The largest proportion of men is in a negro school where the ratio is 176 to 126.

2. *Schools Reporting Deans of Men or Deans of Women but No Deans of Instruction.*—Of the 59 deans of women and 12 deans of men only 16 are reported as doing any teaching. A careful investigation of the explanations given reveals the fact that the greater number of the deans of women have much of the work usually assigned to matrons; but some have advisory duties and a general oversight of the students in their dormitory life and in student activities.

The subjects taught show a great variety and include the following: Domestic science and ethics, United States history and civics, psychology, history, philosophy and psychology, history and sociology, modern languages, French, and current history—one each; while education is taught by two deans. The wide variety of subjects taught and the small number who teach at all might indicate that there is very little relation between the position of dean of women or dean of men and that of *dean of instruction.*

The salary range for the 12 deans of men and the 59 deans of women is from $4000 to $825. The median is $2400 and the middle 50 per cent is between $3300 and $2000. The difference in the salaries paid deans of men and deans of women may be seen by a comparison of the salaries in the schools that employ both (the first figure is the salary of the dean of men) $3000—$2400, $3600—$3300, $3575—$2200, $4000—$3000, $2500—$1800.

Of the 20 schools furnishing full reports, 14 (70 per cent) of the deans were selected from the faculties while only 6 came from the outside.

For the schools reporting on the length of the term of service of their deans 2 years is the median, mode, and middle 50 per cent. The possible explanation of this short tenure is that many of the schools are new and the "office" is of recent creation.

The median age is observed to be 40, the middle 50 per cent from 50 to 35, and the range is from 61 to 29 years.

Thirty-eight per cent have a master's degree; 33 per cent, a bachelor's; 12 per cent, a doctor's; and 17 per cent have no degree.

Thirty-five schools from this group reported their enrollment. All are "coeducational" except two, which are for women only. The largest enrollment is 1200, with 1000 women and 200 men; the smallest shows a total of 45, all women. The percentage of men in the "coeducational" schools runs from 0 to 42.8. There are two schools for both sexes without a single male student, and there are four others with fewer than 10 each. The median enrollment of male students is 64 and of the female students it is 284. The schools of this group show a much wider range than those of the non-dean group, while the relative percentage of men and women is practically the same.

TABLE I.—YEARS OF WORK OFFERED ABOVE THE HIGH SCHOOL

LENGTH OF CURRICULA IN YEARS	NUMBER OF SCHOOLS
4	11
2, 3 and 4	3
1, 2 and 4	2
3	2
2 and 3	6
2	15

It will be noted that more than one-half of the institutions offer above a 2-year course, while 16 out of 39 offer a 4-year course in some form; the mode, however, is 2 years. It seems reasonable to suppose that most of the schools now offering more than a 2-year course will ultimately give a 4-year curriculum with the resultant bachelor's degrees.

In one state, the situation is apparently unique, so far as the facts brought out show. At the end of the first year a certificate is issued; at the close of the second, a diploma; at the close of the third, a still higher grade certificate; and after the work of the entire four years is completed a bachelor's degree and life certificate are granted. Such a plan keeps ever before the student an incentive to remain at her post until the whole task is completed; then, too, it provides easy stations for the dropping out of the student to teach and equal encouragement to return for further honors.

3. *Schools That Have Deans of Instruction.*—(1) In 22 (71 per cent) of the schools the dean looks after the registration of students. This seems wise, since to him usually falls the responsibility of judging their progress during the school year.

2. The calling of faculty meetings is left to the president in 77 per cent of the institutions; while in some the dean has authority in the absence of his superior.

3. The dean of instruction shares equally with the other officers in giving general permissions. The custom varies materially in the different schools: *e.g.*, "Dean of women acts," "President or dean of women," "In absence of president," "When policies are already established," "Executive committee acts"—these are some of the explanations given. But apparently the prerogative of giving permission to students to change their program of study belongs to the dean of instruction.

4. Where the dean does not have the catalog matter under his supervision it is in the hands of the president, dean of women, or an executive committee.

5. Institute meetings are sometimes shared with the principal; yet a large part of this work falls to the dean, and the same may be said with regard to the other community meetings.

6. As a teacher the dean represents a wide range of scholarship interest. Generally he is from the field of "education." The following summary needs no comment.

TABLE II

	Number of Schools	
Education	7	
Education and Psychology	3	
Psychology	3	
Psychology and Methods	1	
Education and Pedagogy	1	
History of Education	1	
Total Education and Kindred Subjects		16
English	3	
English (Professor of Teaching)	1	
Mathematics	4	
Chemistry and Mathematics	1	
Physics and Geology	1	
Economics and Sociology	1	
Ancient Languages	1	
History	1	
Total Miscellaneous		14

7. The teaching load of the dean may likewise be presented in a summarizing table.

TABLE III

Number of Hours	Number of Schools
20	1
15	3
14	1
12	7
11	1
10	5
8	7
7½	1
6	1
5	1
3	2

The median is 10 hours per week, while the middle 50 per cent is included in the 8 to 12. The range is from 3 to 20. The teaching of the dean gives him an opportunity to do some class work and thereby to come in closer contact with the student body; while his short hours allow plenty of time for his official duties.

The weekly time devoted by the dean to official duty is apparently as follows:

TABLE IV

NUMBER OF HOURS	NUMBER OF SCHOOLS
Full time	1
45	1
30	1
26	1
20	3
16	1
15	5
12	1
10	6
9	1
8	1
5	1
3½	1
2	1
Indefinite answers	5

Considering the 25 schools from which the data is for the most part definite, it will be observed that the median is 15 hours per week, while the mode is 10 hours and that the middle 50 per cent is from 10 to 15 hours. The large number of definite answers seems remarkable since the dean's duties are likely to vary from week to week, or from day to day.

8. The median salary paid the deans of instruction in the normal schools is $3500, which is also the mode; and the middle 50 per cent is included between $3750 and $3150. The range is from $6500 to $1600, though practically all the schools show salaries between $2400 and $4250.

9. Twenty-three deans (80 per cent) were chosen from the faculties of the institutions that they serve, so the custom seems firmly established not to bring in new men from without for the "second" place in the normals.

10. The dean's tenure does not reflect a favorable condition.

TABLE V

NUMBER OF YEARS	NUMBER OF SCHOOLS
17	1
14	3
12	2
10	2
7	2
6	2
5	2
4	3
3	2
2	6
1	4
1	2

The median number of years is 4, and the mode is 2 years. The middle 50 per cent is between 7 and 2 years. When the fact that many normal schools are of recent origin is considered the figures do not appear so strange.

The importance of the dean's responsibilities makes an inquiry into his educational preparation a matter of interest. One holds the Bachelor's degree; twenty, the Master's, and nine the Doctor's. By a comparison of these facts with those of the second group, it will be observed that the dean of instruction, as indicated by degrees, has an average of 2 years of training above that of the dean of men and dean of women.

Similarly, his experience so far as age indicates it is interesting. From the 30 schools reporting it was found that the median age of deans is 48 years, the middle 50 per cent is between 42 and 52, and the range is from 32 to 72. The figures would indicate that the tendency is to employ as deans men of middle age and beyond. The dean of instruction is 8 years older than the dean of men and the dean of women (combined), as viewed by medians.

12. The size of the school may be a factor in deciding whether it shall employ a dean of instruction or not. The following summary indicates the facts so far as disclosed in this study.

TABLE VI

ENROLLMENT	NUMBER OF SCHOOLS
3200	1
1800	1
1500 to 1599	1
1300 to 1399	1
1100 to 1199	2
1000 to 1099	3
800 to 899	1
700 to 799	3
600 to 699	2
500 to 599	1
400 to 499	5
300 to 399	2
200 to 299	5

While the median is 600 to 699 and the mode is represented by the 200's and the 400's, it should be kept in mind that this group represents many of the larger institutions. As compared with the other two groups, the median for the nation is much lower.

13. Twenty-five of the 29 schools are coeducational, while four do not admit men. The percentage of men students runs from 4 to 49.2

per cent. The highest percentage of men is found in a school with an enrollment of 833, in which there are 410 men. The lowest percentage is where there is an enrollment of 260, only 10 of whom are men. (A much wider difference is found in the other groups.)

14. The length of curricula offered is given below.

TABLE VII

NUMBER OF YEARS	NUMBER OF SCHOOLS
5	1
4	14
3	1
2, 3, and 4	1
2 and 4	2
2	11

From the table given above it will be noted that with schools having deans of instruction the 4-year type of school is decidedly in favor. The 2-year type comes second, while the others are so much in the minority as to be almost negligible. The conclusion might easily be reached that the future big normal school or teacher's college of the nation is to be a 4-year degree-giving institution with possibly a diploma or certificate at the end of the second year, and different grade certificates issued at yearly intervals.

SUMMARY

1. *The Typical Dean of Men and Women.*—Where there is no dean of instruction, the typical dean of men or dean of women, in terms of medians, is 40 years of age, has a master's degree, was selected from the faculty, does not teach, has acted as dean for 2 years, and has a salary of $2400.

His Normal School.—The typical normal school that employs a dean of men or a dean of women has a curriculum of 2 years, an enrollment of 278 students, and is located in practically all of the states.

2. *The Typical Dean of Instruction.*—The typical dean of instruction, as described in terms of medians, is 48 years of age, has a master's degree, was selected from the faculty, teaches in a department of education, teaches 10 hours a week, does office work for 15 hours a week, has acted as dean 4 years, and has a salary of $3500 per year. His duties are registration of students, giving permissions to students to change their work, arranging catalog matter, assisting in institutes and community meetings, and teaching.

His Normal School.—The typical normal school which employs a dean of instruction has a curriculum of 4 years, an enrollment of 650 students. Remembering again that the results are given by medians based on the answers received, the dean is found in all of the schools of Colorado, Tennessee, and South Carolina; he is employed in one-half or more of the normals located in Georgia, Illinois, Indiana, Kentucky, Ohio, New Mexico, Texas and Virginia; while he is found in only one-third, or a smaller proportion, of the schools in Alabama, California, Kansas, Michigan, Missouri, and Nebraska; and none of the other states have normal schools that employ deans of instruction.

SOME PROBLEMS SUGGESTED

Since only one-fifth of the normal schools employ deans of instruction, the questions which naturally arise are:

1. Does the president of a teacher-training institution need the administrative assistance that he may render?
2. Should the authority be divided where a dean is employed?
3. Does the dean create friction and cause jealousies to arise in normal school faculties?
4. Would it not be wise for the tenure of office to be longer than it is as indicated by the median, 4 years?

By virtue of the fact that the principal must assist lawmaking bodies in drafting suitable school legislation, must attend county court sessions, must visit all the educational gatherings in his territory; there should be a strong man selected to share his responsibility and act during his absence. Then, too, where certain authority and duties are delegated to the dean there should be no cause for friction between the faculty members and the dean.

An aroused public conscience, which is sure to come with a knowledge of the facts, will no doubt cause many boards of teacher-training institutions that do not now employ deans of instruction to realize the necessity for creating such an office and selecting a "fit" man for this responsible position.

FUNCTIONS OF PARENT-TEACHER ASSOCIATIONS

A. R. MEAD

Ohio Weslyan University, Delaware, Ohio

Almost every school system has been called upon in recent years by enthusiasts to promote parent-teacher associations. Such being the case, it is well to examine such a proposal and ascertain what such an organization *can* do, what it *should* do, and what it *should not do.* In order to make clear certain statements which follow, it is necessary to assume that the membership includes parents and teachers and that administrative officers, especially the superintendent of schools will not be members, although such persons may be invited to attend meetings very often.

Seven legitimate types of function may be carried out by a parent-teacher association. They may be described as follows: (1) Self-educative; (2) cooperative; (3) advisory; (4) promotion of publicity; (5) stimulative; (6) promotion of general social welfare; (7) cooperation with national agencies. Each will be described in more detail.

Self-educative Functions.—Groups of parents and teachers organized together may serve to disseminate among parents and teachers facts which both groups need very much. Through such a medium personal acquaintance may be established, which serves both to disarm suspicion and to create possibilities of working together. Teachers can use such a medium to ascertain the educational ideals of the parents; their desires with regard to their children remaining in school; important facts concerning the home life of pupils; the economic status of the homes; the religious tendencies of the people; their recreational activities; their reading practices, the varied industrial activities represented in the country, and the city. Such data rightly used may contribute to increasing the teachers' skill. Parents may become acquainted with the urgent necessity of *prompt* and *regular* attendance of pupils; may acquire a proper interest in such matters as the condition of the school building, the recreational and laboratory facilities of the school, and the like; and under good leadership may even secure the better understanding of the *aims* and technique of classroom instruction which alone can enable them to attain a cooperative attitude. Thus both groups really educate themselves through participation in such an organization.

Cooperative Functions.—There may be several different types of cooperation. One type will be illustrated. The writer has in mind such intimate cooperation as will tend to sustain and reinforce classroom instruction. The teacher of the vernacular whether in the grades or the high school finds many children from excellent homes who have learned to use such expressions as "wy," "wen," "ain't," "Ha'int," "this here," "The boys was sick" and many other forms not approved by the best usage. She will also find many incorrect pronounciations and spellings. Inasmuch as the better forms which she is teaching can be secured only by inhibiting the inferior usages and building up habits of using the better, she often finds the task well-nigh impossible to accomplish. Three persons must cooperate if good habits are to be well formed: The parent, the pupil, and the teacher. The pupil *must* be motivated to do the work well, but parental indifference or ridicule may entirely eliminate any motive possessed by the pupil, or prevent him from having a motive. In such a case, the child will make no progress in acquiring the better forms. Again, such lack of cooperation may admit of the pupils using the incorrect forms outside of the class room and attempting to use the correct forms in the school. Needless to say this is a very undesirable situation. But, if pupil, parent, and teacher cooperate, the work of teaching English will very greatly facilitate and many of the better forms of the language will be acquired by the pupil. Here is where the parent-teachers group may function. The teacher may explain the situation and appeal for cooperation.

Now, if cooperation is so essential in such a matter as acquiring the habits involved in one's spoken and written language, it becomes even more necessary in such matter as the forming of ideals of courtesy, patience, loyalty to one's community, or country. If in these matters and others similarly influenced effective cooperation could be secured, the teacher's time would be saved so she could do other useful things—and the tax payers' money would secure greater results. The parent-teachers association can become a medium for establishing such cooperation.

Advisory Functions.—The parent-teachers group may serve as a committee of consultation and advice to the superintendent on certain selected matters of education. Shall a new and more efficient method of selection of teachers be adopted? Then, the parent-teachers group may serve as a medium of establishing it, through supplying their own reactions and through the explanation of the proposal by the superintendent. True such a proposal might receive a most hostile reception, but if it did not, the superintendent would be twice fortified if he did make the change. Shall the superintendent launch a campaign for increased school support? Let him take the matter to his parent-teachers association and inform them in detail why such support is needed, and try to win their support. If he can convince them then he has at least a better prospect of aid from persons vitally interested. On many other matters such a group may offer valuable criticism and suggestion with regard to policies which depend immediately upon public approval.

Promotion of Publicity.—It is a trite fact that many items concerning our schools never receive due publicity. It is a very rare thing, for example, for any agency to give publicity to commendation for skillful classroom teaching. The agencies of publicity are not always to blame. Newspapers demand that the material make "good story," *i.e.*, an interesting narrative. Data very rarely reach them in that form. Now here is where a parent-teachers group can help. Those members of known ability may be selected to write up for publication items which deserve publicity. They should coöperate with the superintendent in doing this. Again, such a group can secure agencies of publicity not always open to a superintendent. Newspapers, journals, etc., are likely to be more easily secured, if a well-organized group request such publicity. Members may individually disseminate data and help to counteract unfavorable opinion, as well as help build up a constructive favorable sentiment. Now just such help is needed in all local movements for school improvements. To get accurate data disseminated is not always easy, but the parent-teachers association is a medium in which the truth may be placed with good prospects of reaching a large number of influential persons.

Stimulative Functions.—Often a school system is headed by a person who is so overloaded with details that he does not see more important conditions, or he is ignorant of such things, or he fears to make any attempt to secure reforms that he knows are very desirable. It is entirely within the possibilities of a parent-teachers association to do certain things to help stimulate action. For example, a community may need better schoolhouse accommodations. It is entirely within the province of a parent-teachers association to discuss the matter, pass a resolution asking such improvement, and refer the same to the superintendent and board of education by written communication, or orally by a committee, or by both methods. There are numerous persons who will act under such a request to "give the people what they want," who will not act otherwise. Under such conditions, a parent-teachers association may perform a stimulative function.

Promotion of Social Welfare.—In every community there exist some social welfare agencies. It may be a health league, a crusade against gambling, a civic league, or some other organized agency or temporary movement. A parent-teachers association can and should lend support to such agencies for betterment. Such agencies well-conducted really become educational factors, and to realize their greatest possibilities they need the criticism for and against their proposed activities by, and the positive cooperation of, persons interested in securing educational results. These will be found in a parent-teachers association.

Cooperation with National Agencies.—Parent-teachers associations may cooperate with the United States Bureau of Education in publicity work; with the United States Health Service in a like manner; with divisions of the National Educational Association and other National agencies. They may send delegates to sessions of the National Educational Association, and they may become members and thus have a delegate in the legislative body of that association.

Limits of Functions.—There are many matters of school administration in which a parent-teacher association should not interfere. The following list is typical:

1. Ordinary problems of school discipline;
2. Actual selection of teachers;
3. Selection of text-books;
4. Assignment of pupils to grades, room, teachers, and buildings.
5. Actual organization of the course of study;
6. Types of teaching methods used.

The superintendent, principals, and teachers are employed to do these things and the public should not usurp expert functions. The superintendent in these matters is analogous to a physician. We do not advise the physician; neither should we the administrative head of the school on such matters as those mentioned above. In matters that are really internal affairs of the school, in all matters that require a technical knowledge, the parent-teachers association should not interfere. If such interference occurs, it tends to demoralize the school. Herein lies the essential possibility of danger from a parent-teachers association. They are of the laity; the teachers, principals, and superintendents are of the profession. Accordingly, such associations may be useful only as they truly cooperate and participate in such activities as belong to the laity.

THE STUDY HALL PROBLEM

W. W. TUTTLE

University of South Dakota

The study hall in the high school presents many problems to the teacher and to the administrator. Many disciplinary problems originate in the study hall and much time is wasted by students because of the lack of a carefully worked out study hall schedule.

In the University High School a plan has been devised to stimulate scholarship and make the study hall more effective. Those who can attain sufficient academic standing and who conduct themselves in a satisfactory manner are excused entirely from study hall duty, and those who are unable to reach the standard for exemption follow a study hall schedule.

At the beginning of the school year, 1921–22, the following plan for exempting students from study hall duty was adopted: All students who, at the beginning of each nine week period, have an academic average of 85 per cent, with no grade below 76 per cent, and whose conduct has been entirely satisfactory, are excused from all study hall duty.

Each student's record is checked up at the end of each nine week period and if found to satisfy the conditions set forth above, he is exempt from further study hall duty until a succeeding check shows that he has fallen below the standards set for exemption at which time he returns to the study hall. Each check is entirely independent of any preceding one.

From the beginning, much interest was manifest in the plan by the entire student body and they seemed to put forth their maximum effort in order to obtain exemption from study hall duty.

At the end of the first nine week period, 18 of the 60 students enrolled in University High School were eligible for exemption. These students were placed on the same basis for study as university students and were allowed to come to the study hall and go from it at pleasure.

When the check was made at the end of the eighteen week period, it was found that one of those who was exempt during the first nine week period was ineligible for exemption during the second nine week period and that one additional student was up to the standard. The small change in the personnel of the group would seem to indicate that about all of those who were worthy of exemption, attained it during the first nine week period.

The plan as outlined here not only stimulates scholarship and good discipline, but can also be used as a means of alleviating crowded study halls. The results of this experiment have been very satisfactory thus far, and the plan will be continued.

In order to make the study hall more effective for those who were unable to make the exemption standard, each student is asked to make a study schedule for his periods in the study hall. The general principle which is followed in making the schedules, is to study the lesson which is to be recited to the teacher who is in charge of the study hall at this particular period. For example, if the student comes into the study hall after a recitation in Geometry and finds his English teacher in charge, he studies English. Since not all of the students in the study hall at any particular period have classes with the teacher in charge the principle is not universal in its application, but in University High School it works out in more than 75 per cent of the cases.

This plan, together with the general supervised study period at the end of each class, makes it possible for the majority of high school students to do the greater part of their preparation at school, and under the direction of the teacher in charge of the particular subjects.

With the plan as outlined above, the tendency to crowd the study hall is eliminated and effective discipline and scholarship standards are maintained.

BOOK REVIEWS

Clarence R. Stone. *Silent and Oral Reading: A Practical Handbook of Methods Based on the Most Recent Scientific Investigations.* Boston: Houghton Mifflin Co., 1922. pp. xviii, 306.

Mr. Stone's book will be readily received as a real contribution by those who are primarily interested in the improvement in efficiency of elementary teaching. He begins by stating the problems in reading which confront those of us who are "grade teachers:" What must I do? How must I do it? Following we find a clear statement and explanation of the more recent scientific experiments in this field. Upon the basis of the conclusions drawn from these experiments certain general principles of reading methods are developed. Here he gives suggestions in descriptions of lessons and lesson-plans which illustrate how these methods may and have been used in improving reading. One outstanding feature of the book is the many splendid lesson-plans which are given in detail for appreciation and training lessons in silent reading. There has been no other book which does this quite so well. One is impressed immediately by the wealth of material contained in the 295 pages of text.

Although there are good chapters on primary reading and oral reading the book deals primarily with the problems of developing ability in rapid silent reading above the fourth grade. This is of course the field of instruction which has been most neglected and we welcome a book that gives tangible helps.

There is a chapter on reading tests and their use in improving reading which includes a list of tests with publisher and address, and prices; a description of various tests and a discussion of their advantages and limitations.

Those who are particularly interested in the adaptation of instruction to the needs of each child for his best development and growth will be impressed with that part of the book which discusses individual differences, the need for careful diagnosis of specific deficiencies, and the grouping of pupils according to these needs.

There is material of real worth to the normal-school instructor, the supervisor, and the grade teacher. Although this book might be criticized from the standpoint of organization—at times the materials that one would prefer to have unified are scattered through several chapters—or again for evidences of seemingly needless repetition, it may be greeted with enthusiasm by the normal-school instructor as a textbook, by the supervisor as a basis for teachers' reading circles, and by the elementary teacher as a guide to improvement in her teaching.

LOIS HAYDEN MEEK.

Supervisor and Demonstration Teacher,
Washington, D.C., Public Schools.

CHARLES E. BENSON. *The Output of Professional Schools For Teachers.* 88 pages. Baltimore: Warwick and York, 1922.

That over one half of the teachers entering the service should be drawn into city schools is explained generally on the ground that social conditions in cities are more attractive and larger salaries there give evidence of a greater demand for trained teachers and appreciation of their work.

What can be done by normal schools to overcome present unfavorable conditions in rural communities and to stimulate a demand for well-trained teachers is strikingly illustrated in Mr. Benson's recent study of the distribution of approximately 10,000 graduates of normal schools and teachers' colleges. In twelve of the normal schools from one fourth to one half of the graduates from two-year curricula or more became teachers in one-room rural schools.

Most encouraging also is the tendency of normal schools to differentiate the curricula offered in preparation for specific types of work. Of students in a "general" undifferentiated two-year curriculum the percentage of graduates decreased from 86.4 per cent in 1910 to 72.3 per cent in 1915 and to 56.5 per cent in 1920. The figures for the graduates of undifferentiated three-year curricula decreased from 88.2 per cent to 37.5 per cent and to 22.2 per cent for the same years.

The danger of differentiating too sharply is disclosed, however, where the demand for teachers in certain fields or the number of students preparing for those types of service is not sufficiently large to justify it.

The dominant function of a two-year curriculum is, and will continue to be for some years, chiefly to meet the demand for teachers of the elementary school, with specialized training for the primary and intermediate grades.

Mr. Benson's data were secured from an examination of the records of each graduate for the years of 1910, 1915, and 1920 from twenty-six normal schools and teachers' colleges in twenty-one states. The book is replete with tables and charts showing the distribution of approximately ten thousand graduates, according to curricula completed, character of school and type of service entered, the number of years' service rendered, and comparison of tenure of trained and untrained teachers. Much of this information is given separately for each of the schools studied, designated by key-letter known only to the head of the institution concerned, and consolidations are made for the graduates of all of the schools.

Chapter VIII contains a summary of the conditions and tendencies observed with a valuable analysis and interpretation of the situation. Chaper IX suggests under six heads a program based thereon, which is worthy of the careful study of all who have the responsibility for, or may contribute toward, the formation of policies of teacher-training institutions. The book is a scholarly piece of research that will prove of the utmost practical value to all interested in the professional education of teachers.

W. D. Ellis.

Richmond, Va.,
City Normal School.

Webb, Hanor A. *General Science Instruction in the Grades.* George Peabody College for Teachers, Contribution toEducation, No. IV, 1921. 105 pages

This study is based on the contents of 18 textbooks, some 6500 pages of material, closely analyzed by topics. Chapter 1 sets forth the method of the study. The following are the subsequent chapter headings: The Subject matter of General Science; The Acceptability of Topics in General Science; The Size of Topics in General Science; Correlations between the Sciences; The Adaptability of General Science; Test Topics; The Analysis of the Marks; The Analysis of the Complete Reaction; Twenty-seven Combinations; Correlations between Combinations; The Underlying Type.

The study deals critically with the various moot questions and criticisms of General Science as a school study. It reveals the predominance of Physics; the brevity of the treatment of topics; the difficulty of realizing "the spirit" of General Science; the interrelation of topics; the danger of a book's exploiting "hobbies;" the school location of the subject; the problem of "marking;" and so on.

Teachers of general science, it would appear, should profit much from the close study of this monograph.

E. D. Randolph.

MONROE, WALTER S. *Types of Learning Required of Pupils in the Seventh and Eighth Grades and in the High School.* University of Illinois, Bureau of Educational Research, College of Education Bull. 7. 16 pages.

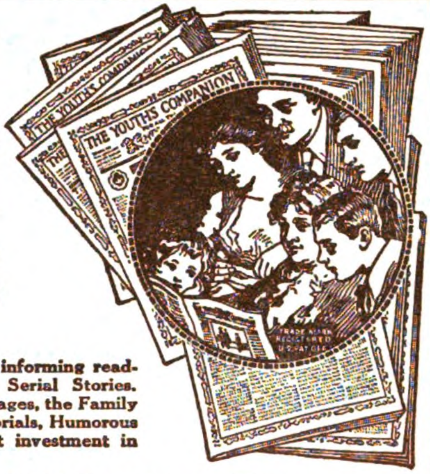
This pamphlet is a useful and very suggestive summary of the types of study or learning recognized by a large number of public school teachers, each answering with reference to the special materials of his daily work. Twelve types of learning through the use of textbooks are described briefly. A brief critical interpretation and evaluation follows, together with a paragraph suggesting additional types of learning. The whole indicates a very alert state of mind on the part of public school teachers in regard to what may be called their *unique* responsibility—that of constantly analyzing the learning process.

E. D. RANDOLPH.

The Educational Screen: The Independent Magazine Devoted to the New Influence in National Education. The Educational Screen Company, Chicago.

As the title suggests this is a magazine concerned with visual education. The editorial section declares the purpose of supplying "the best in theory, opinion, and experience that the country affords." Its 30 pages present six brief crisp articles of wholesome ideals and propaganda.

E. D. RANDOLPH.



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Volume VIII
Number 9

DECEMBER, 1922

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EDUCATIONAL
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Volume VIII December, 1922 Number 9

SPECIAL PREPARATION FOR JUNIOR HIGH SCHOOL SERVICE

HOMER J. SMITH
The University of Minnesota

New conceptions of educational organization or method are not fully tested until practiced for considerable periods under the guidance and through the aid of supervisors and teachers properly prepared. There must be special knowledge of the aims to be served and of the means best suited to the securing of hoped-for results. When all persons concerned with a proposed change think rather uniformly about *what* should be accomplished, *why*, and *how* it should be accomplished, then is the condition for proof a fair one.

During the 10 years just passed there has been a steady growth in the number of junior high schools and we may well ask ourselves what the special preparation for service in these schools has been. To what extent are we operating junior high schools with prepared workers? Will the equipping of teachers and administrators be able hereafter to keep pace with the extending of reorganization? What per cent of our training institutions are active in this new field. Does any type of institution lead the others in its offerings? Does any section of the country seem to have grasped more surely than others the importance of this work? How do universities and normal schools compare? What of our private colleges and training schools? What is the nature of the special training activities? Who are the men entrusted with this important work and who must be most able to judge of the success of the movement within defined areas?

It has seemed worth while to attempt to answer some of these questions by an examination of the catalogues of training institutions. This method is limited, but it has seemed productive. It is, at least, not unfair to institutions, states, or sections of the country.

All institutions listed in the latest Government directory, county training schools excepted, were invited to mail the most recent available catalogues of the regular year, the summer session, and the extension and correspondence departments. Many did not respond, but for 380 institutions we have the facts of activity, insofar as the printed curricula and course descriptions are indices of that activity.

Table I gives us the scope and amounts of activities, by states. It shows the ratios of non-active to active institutions; it gives the numbers of institutions having practice schools of junior organization and the numbers having curricula specially designed for the preparation of workers in these schools. General administration courses, offered during the year, in the summer session, by extension and by correspondence are located, as are the special subject-methods courses. It was first thought possible to assign index numbers to the states by giving arbitrary values to the various types of activity. We could not, however, depend upon our judgment in weighting and felt that the ratio of the non-active to the active schools would in each case greatly affect the score.

In general we may say that the North is more active than the South and that the great bulk of the special training is in states lying east of the Mississippi and north of Mason-Dixon's Line. Several states outside this area deserve special mention—Alabama, California, Colorado, Kansas, Minnesota, Missouri, Nebraska, North Carolina, Oklahoma, and Washington. Practically one-third of the 380 institutions are doing something in the work of special preparation.

We find 254 non-active institutions and 126 schools in some measure active, of the 380 schools examined. These schools maintain 30 practice departments and 38 special curricula. Many of the curricula were not shown in full in the bulletins and it was, therefore, impracticable to attempt a tabulation of the courses comprising them. Such tabulation is suggested as an extension of this study and may well be carried on by correspondence and the questionnaire method.

One hundred and thirty-one general courses in the administration and supervision of junior high schools were found, 68 being given during the regular year, 53 in summer sessions, 6 by extension, and 4 by correspondence. The special methods courses in mathematics, English, science, etc., total 125 and are later listed by subjects.

INSTITUTIONS COMPARED

A two-fold classification of the institutions listed may be practically made. Each school may be said to be either a *Normal School* (teachers' college) or a *College* (university), public or private. Most of the private institutions fall within the "college" group. The following

TABLE I.—ACTIVITIES IN THE PREPARATION OF TEACHERS AND SUPERVISORS FOR JUNIOR HIGH SCHOOLS

The States Compared

States	Schools examined 280		Total offerings[1]						
	Non-active 254	Active 126	Practice department	Special curricula	Regular course	Summer course	Extension course	Correspondence course	Special methods
Alabama	2	7	3	3	5	5	..	1	18
Arizona	2	..	..	..	..	..	..	..	..
Arkansas	2	..	..	..	..	..	..	..	..
California	4	5	..	2	4	4	1	..	2
Colorado	3	3	..	1	2	2	..	..	2
Connecticut	3	..	..	..	..	..	..	..	..
Delaware	1	..	..	..	..	..	..	..	..
District of Columbia	3	1	..	..	..	1	..	..	..
Florida	...	2	1	1	2	1	1	..	..
Georgia	6	1	..	..	..	1	..	..	..
Idaho	8	1	..	1	1	..	..	..	6
Illinois	14	3	1	..	2	2	..	..	4
Indiana	13	6	..	4	4	2	..	1	8
Iowa	11	3	1	..	3	2	..	..	..
Kansas	9	4	3	..	3	3	..	..	2
Kentucky	3	2	1	1	..	1	..	..	..
Louisiana	2	1	..	..	1	..	..	..	..
Maine	3	4	1	2	1	1	..	..	5
Maryland	3	1	1	..	1	1	..	..	4
Massachusetts	6	3	..	..	8	1	..	..	8
Michigan	8	4	2	..	1	2	..	..	1
Minnesota	3	5	3	1	1	1	..	..	6
Mississippi	6	..	..	..	..	..	..	..	..
Missouri	9	2	..	..	2	1	..	..	5
Montana	4	..	..	..	..	..	..	..	..
Nebraska	7	4	..	1	3	1	..	..	1
Nevada	1	..	..	..	..	..	..	..	..
New Hampshire	1	1	1	..	..	..	..	..	1
New Jersey	2	1	..	..	..	..	..	..	2
New Mexico	5	..	..	..	..	..	..	..	..
New York	9	11	1	1	4	3	1	..	12
North Carolina	10	3	..	..	2	3	..	..	1
North Dakota	6	2	1	..	2	..	..	..	..
Ohio	16	3	2	..	1	2	..	..	8
Oklahoma	4	5	..	4	1	1	..	..	..
Oregon	2	2	..	..	2	..	..	..	..
Pennsylvania	11	13	2	7	4	5	2	1	9
Rhode Island	2	..	..	..	..	..	..	..	..
South Carolina	5	..	..	..	..	..	..	..	..
South Dakota	11	..	..	..	..	..	..	..	..
Tennessee	7	1	..	..	1	1	..	..	1
Texas	11	3	2	..	..	..	..	..	2
Utah	1	1	..	1	..	..	..	..	1
Vermont	1	3	1	1	1	1	..	..	1
Virginia	8	2	..	1	2	2	..	..	5
Washington	3	3	..	..	3	..	..	1	2
West Virginia	7	3	1	2	3	..	..	..	..
Wisconsin	6	6	2	3	8	2	1	..	8
Wyoming	...	1	..	..	..	1	..	..	..
Totals	254	126	30	37	68	53	6	4	125

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[1] *Total offerings* is to be interpreted total institutions within a state making each named offering. The fact that some schools offer more than one course, either general or special, was disregarded. *Special methods* means the total of courses in mathematics, English, etc.

table shows the comparative service of the two types, in the preparation of junior high school workers.

TABLE II

ACTIVITY		IN NORMALS	IN COLLEGES
Practice departments		25	5
Special curricula		30	7
Courses, general		40	91
Courses, special methods		69	56
Total institutions examined	380		
active	126	63	63

The fact that, of the active institutions, there are equal numbers of schools in the *normal* and *college* groups makes comparison very convenient. The numbers set opposite the four types of activity in question can be taken at full value. The normal schools are far in the lead of universities and colleges in the number of special junior practice schools and of special curricula. General courses in administration of the reorganized unit of the school system are more common in colleges. In special methods the difference is less marked and is in favor of the normal school. No general statement of relative importance can well be made, because the activities are of unequal value and the numbers reached by them are also highly variable.

SPECIAL SUBJECTS COURSES

No course was tabulated the title of which did not indicate that it is specifically for junior high school training. A few were described, but these only in general terms, so that the frequency of mention of the phases presented cannot be shown. They are here listed in the order of their frequency of appearance, the numbers indicating institutions offering the corresponding courses.

TABLE III.—COURSES, SUBJECT METHOD

English	32	Civics	9	Music	5
Mathematics	22	Science	8	Languages	3
Geography	15	Industrial Arts	8	Art	2
History	14	Domestic Science	6	Physical Education	1

12 different subjects 125 courses

48 different institutions 27 states

Twelve different subjects are considered worthy of detailed treatment in the light of junior high school needs. Forty-eight institutions in 27 states (only 37 states are in any way active) offer these special courses to the number of 125. English, mathematics, geography, and history lead in frequency.

CONTENT OF THE GENERAL COURSES DESCRIBED

The inadequacy of course descriptions in the typical normal school and college bulletin is commonly appreciated, but it is interesting to note what phases of the question are held to be most worthy of treatment. Limitation of catalogue space in some measure accounts for low frequencies in the lower half of the list, but it probably would not affect the order or the phases first named.

TABLE IV.—CONTENTS OF JUNIOR HIGH SCHOOL ADMINISTRATION COURSES

PHASES PRESENTED	COURSES INCLUDING EACH
Need or purpose of reorganization	80
Programs and curricula	75
Organization and administration	72
Methods and supervision	67
Historical development	43
Teachers, qualifications, and duties	28
Subject matter	24
Extra curricular activities	22
Individual differences, tests, adolescence	22
Admission, promotion, and grouping	15
Articulation	14
Experimental aspects and problems	13
Buildings, equipment, and grounds	13
Discipline	13
Representative schools	11
Local needs	10
Guidance	9
Supervised study	8
Costs	7
Selling the idea	1

SUMMARY

1. Practically one-third of the states support some activities in the training of teachers and supervisors for junior high school work.

2. The North is more active than the South. The states having the greatest variety and amount of activities lie east of the Mississippi River and north of Mason-Dixon's Line. Ten states, without this area, deserve special mention—Alabama, California, Colorado, Kansas, Minnesota, Missouri, Nebraska, North Carolina, Oklahoma, and Washington.

3. We find 126 active institutions, of 380 that were examined. There were located 30 special practice departments, 38 institutions having special curricula, 131 general courses in administration and supervision (regular year, summer session, extension, and correspondence, total) and 125 special subject-methods courses.

4. Of the 126 active institutions there are equal numbers of *Normals* and *Colleges* or *Universities*. Normals lead in practice departments, special curricula, and special methods courses. Colleges offer more general administration courses. The importance of these activities being unequal, no general comparative statement can be made.

5. Special methods courses are offered in twelve different subjects, and of the twelve, English, mathematics, geography, and history courses are most numerous. The total of 125 methods courses are distributed in 48 institutions scattered in 27 of the 37 states active in any degree.

6. The phases stressed in the general administrative courses are the *need or purpose of reorganization*, *programs and curricula*, *organization and administration*, *methods and supervision*, *historical development*, *teacher qualifications and duties*, *subject matter*, *extra-curricular activities*, and *provisions in recognition of individual differences*.

NOTE.—The following data are reserved through lack of space and because of their slight interest to the general reader. The possibility of their usefulness to some, as bases for further study, is recognized and they will be supplied upon request: list of institutions used for Table I, with complete activity of each; separate Lists of practice schools, of special curricula, of administration courses, of special methods courses in any subject mentioned in Table III; the names of lecturers, by institutions, regular and summer. Interested persons may address the writer or Professor S. R. Powers, University of Minnesota, under whose direction the paper was prepared.

REMAKING A NORMAL SCHOOL COURSE IN READING

FANNY BALLOU

State Normal School, Kalamazoo, Michigan

Miss Ballou's article is published exactly as it was prepared for one of the courses at Teachers College while the author was completing the work for her A. B. Degree in the fall and winter of 1921–22. There have been no revisions made owing to the tragic death of the writer, who was killed in a railroad accident shortly after her graduation in February, 1921. It stands as a record of one piece of her work which was actually completed.

Miss Fanny Ballou was one of the most valued members of the Faculty of Western State Normal School, Kalamazoo, Michigan, where she had spent several years of her life in devoted service; making a distinct contribution to the growth and upbuilding of the school.

A graduate of De Kalb, Illinois Normal School, with six years' experience in the public schools of Riverside, Illinois, Miss Ballou brought to her work at Western, training, experience, and ripe character. She carried on her work as critic teacher with love, enthusiasm, and the spirit of growth. She took her place in the body of the Faculty as one of the leading, sustaining figures.

Her loss is one of those that cannot be replaced. Yet tangible results of her work, her memory, and the spirit of her service, will live long and become a part of the heritage of Western State Normal School; merely exemplified in a scholarship fund recently established in her honor.

G. EDITH SEEKELL.

KALAMAZOO, MICH.

When it seemed necessary to reorganize the course of study in Beginning Reading in the Western State Normal School a better knowledge of the reading situation in Michigan was sought. In the hope of getting clues 125 copies of the following questionnaire were sent to representative cities in our district:

> "In planning our course in Beginning Reading it would be helpful if we could have information concerning the reading situation in Michigan. Will you please cooperate with us by answering the questions given below and returning them as soon as possible?
>
> "1. Is reading taught in your kindergarten?
>
> "2. What method do you use as a basis for your teaching of reading?

"3. If you do not use a method please give your reasons for your decision?
"4. Is phonics given a special place on the program?
"5. In what grades is phonics taught?
"6. Is provision made for reading aloud to the children by the teacher?
"7. In what grade is spelling first given?
"8. Please state frankly what you consider the greatest weakness on the part of the Normal Schools in training teachers to teach reading."

One hundred and three questionnaires were returned. A few questions were not answered. A short report of the findings follows:

1. Places teaching reading in the kindergarten.................. 48
   (Two of these are sub-primary rooms.)
2. Methods, commercial and otherwise, used in beginning reading.

Aldine	33	Howe	1
Beacon	13	Natural method	1
Elson Runkel	11	Lewis primer	1
Ward	8	See and say	1
Progressive road	4	Based on phonics	1
Gordon	4	Based on stories and sentences	9
Merrill	4		
New education	2		

3. Special provision for phonics.

Kindergarten	9	Grade IV	16
Grade I	91	Grade V	4
Grade II	86	Grade VI	3
Grade III	55	No phonics	2

4. Spelling first taught.

Grade I	40	Grade III	2
Grade II	19	Grade V	1

5. Reading aloud to children by teacher.

Believe in it and make provision for it	102
Does not believe in it	1

6. Criticisms of normal school training in beginning reading.

As to content	7
As to speech, voice, enunciation, rhythm, etc	9
As to psychology of reading	3
As to methods of reading	19
General in nature	35

Examples of the best criticisms of the teacher's equipment follow:

CONTENT

"Not broad enough acquaintance with biography, history, and literature to select material that will give proper growth in character building and moral training."

"Suggest more emphasis on teacher's opportunity to inspire boys and girls to do their own reading."

"The fault I find is the lack of enthusiasm, caused, I suppose, by lack of real liking for literature. Too many teachers get the mechanical part and so make students do the same. The result is 'dry bones' and high school students who 'hate to read.'"

"Whether the normal schools can make a teacher like literature and like it with a real, 'honest-to-goodness' liking, so that they thrill to it, I do not know. That is the kind of teacher for reading that I want."

"Teachers recently from normal schools are teaching reading much better than those did who came a few years ago. I believe it is because more emphasis is being placed on *content*. Perhaps we would do better, if we put still more emphasis on content and let form come largely that way."

"New teachers are weakest in the supervision of the children's *study* of reading as a *thought getting* process."

METHOD

"Indefiniteness as to method. In the effort to have them use just any method, they have no method."

"Young people are taught that a certain method is wrong. Then when they are compelled to use 'the wrong method,' their enthusiasm is wanting."

"Lack of adaptability to local conditions, particularly, the lack of ability to use texts and methods different from those used at the normal school."

"The young teacher advances her beginner's class too rapidly. They lack tact and ingenuity in teaching new words. They do not appeal to imagination of the child."

"Systematic training in phonics is neglected; too much attention is given to the better readers of the class and in many cases the poorer readers are neglected. Some are too mechanical."

"The average normal school graduate is wedded to the 'natural method' or some other and combats the method in use. They are likely to be very tenacious of their own ideas in this respect. However, they all learn as a rule. It is only the rare exception who won't."

PSYCHOLOGY OF READING

"A better understanding of the psychology of the subject is needed."

"In reading aloud, little appreciation of the rhythm of words that comes through the utterance of groups that run together in the expression of ideas or of special meanings."

"Young teachers expect too much at first. Their patience is too limited. A better understanding of child psychology and of the psychology of reading would assist materially. With this knowledge, the young teacher would be more sympathetic and hence would reach the pupils."

SPEECH

"Since reading is a fundamental subject in the primary grades, it would seem that some provision needs to be made whereby all people who are going out to teach in primary schools, should have definite training in the teaching of reading."

"Teachers of all grades, especially those of the intermediate and higher grades need a better working knowledge of the elements of good speech. Distinct enunciation and how to get it from children, needs to be taught. One of the difficulties in the way is a lack of knowledge of pure consonant sounds and their value in distinct speaking."

"Lack of expression—*i.e.*, many of the teachers seem unable to read naturally and expressively."

"Teachers are not taught to read themselves, or do not know how to read; therefore they are unable to get the best results. Teachers ought to know how to tell stories to children."

"Teachers lack in ability to teach phonics. Teachers are not well equipped to read to pupils."

"The dramatic feelings necessary for an impressive oral interpretation of the text are not developed."

During the summer of 1920, a class of 75 experienced primary and rural teachers were asked what they considered their biggest problems in teaching reading. The most insistent questions are given below:

1. When shall we teach reading?
2. How and when shall we introduce formal reading?
3. Would you discourage mothers helping their children to read?
4. What steps are needed in using a game as the basis in reading?
5. What shall be done when some children are more capable and more ready for reading than others?
6. Shall word-drills be given in Grade I?
7. How many new words shall be taught each day?
8. How can reading be a continued pleasure?
9. How many rural schools get more worth while material?

10. How soon after the beginning of the year shall primers be used?
11. When shall phonics be introduced?
12. When and how shall supplementary material be introduced?
13. How can we best dramatize?
14. When shall we go from print to script?
15. What are the best stories to be told or read to the different grades?
16. How can we make children of little initiative, enthusiastic about their reading?
17. How can we make a poor system of readers (which are "law" in the schools) really interesting?
18. If one must teach by a certain method, should he follow it closely, or deviate from it where it needs improvement?
19. How can we increase efficiency in reading in the intermediate grades°
20. How can lip movement be eliminated?
21. What are the best tests for comprehension, and for speed?
22. How can one help the children to acquire good pronunciation and enunciation?
23. How can the rate of reading be increased?
24. What are the reasons for the hesitating reading in the upper grades?
25. What constitutes a useful "reading vocabulary" for children in Grades I and II?
26. What shall we do with children who memorize material?
27. Is there any value in concert work in reading or in word drill?
28. What are the masterpieces that children in the upper grades should know?

Besides using the questionnaires and problems raised by the primary teachers, comparisons were made with the course in "Silent Reading in the Primary Grades" prepared by Dr. Norman Cameron of the Baltimore Teachers' Training School, and also with the course of study in reading for Battle Creek, Michigan, prepared by Supt. Coburn and his assistants.

Following such methods a course was finally worked out which, however, is still in an experimental stage. In 3 years' time, it has had as many revisions. We hope eventually to satisfy all the needs felt by teachers within this field of important problems. The reason for giving much in the way of subject matter before any method or psychology or history is given seems to be sound. One of the biggest reasons why reading teachers fail is because they themselves do not know or appreciate the richness and the breadth of children's literature. This is fundamental. The first month in this course is given over to intensive and extensive reading of folk-tales, myths and poetry. Much memorization of our best poems for children is used. On the whole, teachers seem more grateful for this part of the course than for any other.

With so much by way of introduction the course as it now stands is presented for criticism and suggestion from others interested in making normal school instruction bear purposefully on the problems of teaching.

OUTLINE OF COURSE IN BEGINNING READING

I. Aims of course.
   (*A*) To study the child in the light of his reading needs; to understand and appreciate the literature that is suitable for this period; and to find the best ways of creating and developing a love for reading and an ability to interpret the printed page.
   (*B*) To judge, according to well worked out tests, the best "methods" in beginning reading; to consider the tests now being used in reading, and the psychology of teaching spelling and language.

II. Definition and aim of all reading.
   (*A*) What are the fundamental processes involved in all reading?
   (*B*) What problems need to be worked out here?

III. Linking beginning reading with kindergarten work.
   (*A*) What are interests, instincts and mental characteristics of children of this age?
   (*B*) What are the activities in which kindergarten and primary children engage? (Norsworthy and Whitley, "Psychology of Childhood." Chap. XV.)
   (*C*) What are some of the stimuli and some of the responses?
   (*D*) How may reading be taught so that the experiences and activities of kindergarten, home, and farm may be utilised as a basis? (Obtain through direct observation.)
      1. Games.
      2. Rhymes.
      3. Dramatization.
      4. Songs.
      5. Riddles.
      6. Concrete experiences.
      7. Reading taught incidentally with routine, work and play.
      8. Nature excursions; history, etc.

   Work out both form and method of procedure.

IV. Consideration of subject matter of any primer or reader. Use bibliography on stories, story telling and poetry.
   (*A*) Content—value—bases for choice of stories.
      1. Taste of children.
      2. Action in story.
      3. Structure of story.
      4. Economy of incident.
      5. Economy of emotional appeal.
      6. Ethical soundness.

(*B*) Kinds of stories.
  1. Folk and fairy stories and their values.
    (*a*) Accumulative tale.
    (*b*) The animal tale.
    (*c*) The humorous tale.
    (*d*) The realistic tale.
    (*e*) The romantic tale.
    (*f*) The old tale and the modern tale.
  2. Sources of fairy tales and folk tales.
    (*a*) Perrault.
    (*b*) Grimm Brothers.
    (*c*) Norse Tales (Dasent).
    (*d*) English Tales (Jacobs).
    (*e*) Hans Christian Anderson.
    (*f*) Joel Chandler Harris.
  3. Myths.
  4. Hero Tales.
  5. Stories of real people.
  6. Nature and animal stories.
  7. Stories with an inner meaning.
    (*a*) Symbolic stories.
    (*b*) Proverbs.
    (*c*) Fables.
(*C*) Poetry for primary grades.
  1. Basis of selection.
  2. Use and value of poetry.
  3. Representative poets for little children.
    (*a*) Mother Goose.
    (*b*) Edward Lear.
    (*c*) Christina Rossetti.
    (*d*) Robert Louis Stevenson.
    (*e*) Eugene Field.
    (*f*) Walter De La Mere.
    (*g*) Annette Wynne.
    (*h*) Mary Carolyn Davies.
  4. Study of the best anthologies of children's poetry. (See *Bibliography.*)
  5. How to teach a poem.
(*D*) Value of story-telling and reading aloud to children.
  1. How to select stories and the proper reading material.
  2. How to tell stories.
  3. How to read aloud.
  4. Value and method of working out dramatization. (Lowe: "Literature for Children." Bryant, Sara Cone: "How to Tell Stories.")
(*E*) Illustrators of children's books.
  1. Jessie Wilcox Smith.
  2. Arthur Rackham.

3. Maxfield Parrish.
4. Edmund Pogany.
5. Charles Robinson.
6. Health Robinson.
7. Willy Pogany.
8. Maginel Wright Enright.
9. Blanche Fisher Wright.
10. Leslie Brook.
11. Walter Crane.

V. Lists of good supplementary material worked out. (See *Bibliography.*) What will be your basis of choice?

VI. Physiology and hygiene of reading. (Klapper: "Teaching Children to Read." Huey: "Psychology and Pedagogy of Reading.")
  1. Processes in oral reading.
  2. Eye movement in reading.
  3. Causes of eye strain.
  4. Hygienic requirements of properly printed books.

VII. Psychology of reading. (Gray, William S., of University of Chicago: Principles of Method in Teaching Reading. *The Eighteenth Yearbook,* Nat. Soc. for Study of Education.)
  1. Value of inner speech.
  2. Psychology of word recognition.
  3. Relation of rate of reading to thought acquisition.
  4. Congenital word blindness. (*Elem. Sch. Jour.*, Vol. XVIII, 680–700; 757–69, May–June, 1918.)

VIII. Pedagogy of reading.
  (*A*) When shall reading be taught?
  (*B*) What are the basic aims in reading?
  (*C*) What must be considered in thought reading? (Kilpatrick, W. H.: "The Project Method.")
  (*D*) What worth-while projects have children worked out in reading? How can we develop the "whole-hearted" attitude? (Bonser: *Elem. Sch. Curriculum.*)
    1. How conduct a free reading period where children choose their own books and later give reports.
  (*E*) When and how shall phonics be given as aid in the mechanics of reading?
    1. Object of phonics.
    2. Organs of articulation.
    3. Classification of sounds.
    4. General directions for all phonic lessons.
    5. Causes of habitual mispronunciation.
    6. Correction of habitual errors.

IX. Score card for the testing of any reader. (Prepared by R. O. Stoops, Superintendent of Schools, Joliet, Ill.)
  (*A*) Subject matter.
    1. Value as literature.
    2. Value if not literature.

        3. Appeal to children's interest.
        4. Moral value.
        5. Variety in type, including humor.
        6. Adaptability to dramatization.
        7. Quality of material.
        8. Amount of suitable poetry.
        9. Gradation of material.
        10. Material invented for sake of method.

If so, does method outweigh lack of literature and thought material?

- (*B*) Mechanical make-up of book.
    1. Binding.
        - (*a*) Flexible.
        - (*b*) Durable.
        - (*c*) Artistic.
    2. Paper.
    3. Type.
    4. Arrangement of page.
        - (*a*) Crowded.
        - (*b*) Length of lines.
        - (*c*) Arrangement of phrases.
    5. Illustrations.
        - (*a*) Appeal to children.
        - (*b*) Aid in getting thought of selection.
        - (*c*) Execution.
        - (*d*) Location on page.
        - (*e*) Distribution through book.
- (*C*) Pupil's problems.
    1. Sentences within grasp of child as to thought and construction.
    2. Vocabulary.
        - (*a*) Within grasp of child.
        - (*b*) Introduced gradually.
        - (*c*) Amount of repetition.
        - (*d*) Number of words.
    3. Treatment of phonics.

X. Basic methods of beginning reading.

- (*A*) History of reading. (Huey: "Psychology and Pedagogy of Reading." Chaps. X–XIII.)
    1. Picture language. (Primitive, Babylonia.)
    2. Origin of alphabet, Egypt. (Carried to other countries, Greece, Rome, Germany, England.)
    3. The evolution of the printed page.
        - (*a*) Printing came very soon after invention and use of paper.
- (*B*) History of methods in reading.
    1. Synthetic.
        - (*a*) Alphabetic.
            1. Greeks and Romans Quintilian A. D. 68. Alphabet blocks.
            2. *ab, eb, ib* columns (ninth century).

        3. Book of Common Prayer, 1419.
        4. A. B. C. Book, Schulte, 1532.
        5. Comenius, "Orbus Pictus," 1657.
        6. New England Primer, 1690.
        7. Gingerbread Method (Basedow, 1723–1790).
        8. Webster's Spelling Book, 1783.
        9. McGuffey's six book series, 1850.
    (*b*) Phonics and phonetics.
        1. Phonetic system of the Jansenists (Port Royal Schools).
        2. Worchester's Primer, 1828.
        3. The Pollard Method, 1870.
        4. The Ward Method, 1890.
(*C*) The Analytic Method. (Klapper: "Teaching Children to Read." Huey: "The Psychology and Pedagogy of Reading.")
    1. Word.
    2. Sentence.
    3. Story. (Show advantage of these three modern methods and how they can be used in combination, advantageously.)
    4. Development of independence in child.
    5. Uniformity of series from pupil's standpoint.
(*D*) Consideration of special methods now in use.
    1. Aldine.
    2. Beacon.
    3. Story hour.
    4. Merrill.
    5. Elson-Runkel.

XI. What are some of the habits that we should work for from the beginning? (McMurry: "A Special Method in Primary Reading.")
    (*A*) What incentives can we use that will help here? (Starch: "Educational Psychology.")

XII. Consideration of the best oral and silent reading tests now being used.¶ (See *Bibliography* in *Eighteenth Yearbook*, Nat. Soc. for Study of Education; Work our Courtis, Kansas, and University of Chicago tests fully. (Starch: "Educational Psychology.")

XIII. The teaching of spelling. (See outline and notes on method in "Western State Normal Training School Spelling Book.")

XIV. Language and its relation to reading. (Sheridan: "Speaking and Writing English." Mahoney: "Standards in English.")
    (*A*) Oral language.
        1. The impression-expression are.
        2. Conversation period.
        3. Original stories and riddles.
        4. Correction of errors in speech.
    (*B*) Written language.
        1. Short stories.
        2. Poems.
        3. Letters.

        4. Invitations.
        5. Picture.
        6. Nature study.
        7. History.
    (*C*) How to conduct various sorts of language lessons.
XV. Activities of class.

PRACTICAL ASSIGNMENTS TO ACCOMPANY THE COURSE

1. Observations in kindergarten; listing activities found there. The making of charts, showing how reading may be worked out as a natural process based on these interests. A series of visits to Grade to verify our belief.

2. The detailed working out of games, poems, riddles, dramatizations, etc., which may be used in motivating reading. Such detailed plans are to be "tried out" on the class of student-teachers as a convenient means of criticism and a step toward improvement.

3. Making a compilation of all the findings in the way of natural means of teaching reading. Analysis of each by way of exploring its possibilities to promise.

4. The making of a small "first" primer based on one interest of small children. Illustrations from magazines, or original work with crayon or paint; printing large, made with sign-marker. These books should be such as children could and do, under good teaching, make.

5. Dramatizing of old folk tales both on paper and in actual play.

6. Study and analysis of magazine articles relevant to the teaching of beginning reading.

7. Testing children in the training school in speed and comprehension.

8. Critical study and rating of a few of the most used "methods" in Michigan.

OBJECTIVE MEASURES OF INTELLIGENCE IN RELATION TO HIGH SCHOOL AND COLLEGE ADMINISTRATION

ALEXANDER C. ROBERTS

University of Washington

"The most hopeful development in recent American education" is the well-considered judgment of a western university president upon the development of objective measures of intelligence. American education has made notable progress in many fields since the beginning of the twentieth century. If the development of objective measures is the most hopeful of all, there are certain things we want definitely to know about them. What are these objective measures? Where did they come from? Who did the work? What may next be done to transmute this hope into accomplishment and this promise into approved educational practice? What help may superintendents, high school principals, and college administrators expect from this—the most hopeful of recent American educational developments?

These objective measures of intelligence, numerous but admittedly incomplete, diagnostic but crude and open to charges of inaccuracy at present, will continue to be *hopeful* to educational administrators just in proportion as they prove helpful in solving the multitudinous office problems of registrars, principals and superintendents. That is to say, these measures of intelligence must forsake the cloistered quiet of the psychological laboratory and take up their share of the burden of our workaday educational world. Indeed they must eliminate whatever elements of mere scientific curiosity and mental gymnastics they may still contain, and out in the high school and elementary classroom, substitute unvarying accurate measurement for our various subjective estimates of student ability.

Amazing has been the activity of college workers in this field. Out of the ceaseless study, the bewildering experimentation, and the complex statistical evaluation, new and hopeful measures of mental ability are coming to displace or supplement those measures upon which we have depended for years, but which are proving inadequate in our hands. There is hope for the superintendent and principal that the intelligence tests will help in a wiser classification, promotion, graduation, and certification to college of the hordes of high school students, and there is hope for the administrators of colleges and universities that the wise use of the intelligence tests will assist in a more adequate handling of the students after they reach the campus.

ANCIENT HISTORY

Where did the intelligence tests come from, and when, and who did the work? Anything back of 1910 in this field is ancient history. The story of intelligence tests begins with the foundational experiments of Galton in England, Ebbinghaus and Munsterberg in Germany, Binet in France, and Cattell, Jastrow, Hall and others in America in the eighties and nineties. The first psychological inventory in America was the ten tests devised by Cattell at the University of Pennsylvania in 1890, and the high mark of this period was reached by Cattell and Farrand at Columbia in 1896 in their individual test with one hundred students. It may be of historical interest to note the scope of the Cattell-Farrand tests. The preliminary data covered handwriting, age, birthplace, nationality, and the profession of the father of the student. Many supplementary data called for the opinion of the recorder:

Do you judge him to be straightforward, ( ), medium, ( ), not straightforward, ( )?

Would you call his temperament choleric, ( ), sanguine, ( ), melancholic, ( ), phlegmatic, ( )?

Many of the measures were physical—color of hair and eyes, height and weight, size of head, breathing capacity, vision, keenness of sight and preference for colors, hearing, dermal and muscular sensations, including the perception of force of movement and tremor. Time measurements included reaction time for sound and perception of space and time. The mental tests were for memory and imagery—both subjective. There was no claim or suggestion that the tests were useful for guidance or diagnosis, and in 1901, Wissler announced that there was nothing of value in the correlations at Columbia.

In the meantime a series of individual tests were being worked out by Binet in France. In 1895, he and Henri published a criticism of the work of various investigators up to that date. In 1903, Binet published an account of the careful and repeated tests of the mentality of his two small daughters over a period of several months. The year 1905 marks an epoch in the study of human intelligence, for in that year the first list of graded individual tests were announced by Binet and Simon, together with directions for giving and scoring them. The tests were reissued in 1908 in an improved form, and the tremendous movement for the classification of children according to mental age, the segregation and acceleration of the supernormal, the elimination and special treatment of the subnormal, was under way. In America several revisions of the Binet-Simon tests have resulted in closer measures under American conditions, and at present the standard individual test used very widely is the Stanford revision of the Binet-Simon tests, the work of Terman and his colleagues at Stanford University.

In 1907 a committee of American psychologists was appointed to develop intelligence tests, and with their work ancient history drew to a close.

MIDDLE PERIOD

Then followed a period of very rapid development of so-called group tests. Real tests of intelligence began to appear; various tests were tried out and rejected; promising parts of inadequate tests were combined to form new tests. It was a period of the testing of tests formulating, arranging, scoring, weighting, comparing, developing technique, correlating with grades and with other tests. Under the crossfire of experimentation, certain types of tests rapidly became truly objective, free from personal opinion and bias, and surprisingly accurate in making cross-sections of the intellectual storehouse.

In 1913, Marguerite Calfee reported the results of 4 tests with freshmen at the University of Texas—card-dealing, card-sorting, alphabet sorting, and the mirror test. The correlations with college grades were very low—in fact 12-year-old boys from the grades made better correlations than the university students, and the girls were uniformly faster than the boys.

Freshmen students at Northwestern University were tested by W. H. Uhl. Three tests were used—a completion test, (Trabue), hard opposites, and a 100-word information test. The results indicated that the tests failed to measure intelligence accurately or adequately.

In 1912, Karl T. Waugh developed a series of seven tests to be used at Beloit (1) a cross-out test for concentration of attention, (2) a list of words for range of information, (3) a series of symbols and numbers for speed of learning, (4) a list of opposites for quickness of association of ideas, (5) a puzzle solution for ingenuity, (6) a test of steadiness and (7) a test for memory. The author recognized the limitations in the value of these tests, although positive correlations ranging from 0.54 down to 0.24 were obtained for all of them except the steadiness test. Here is a distinct foreshadowing of the later standardized group test.

At Reed College, Rowland and Lowden selected a large group of tests, a series of cards for rote memory, a story with 10 logically related incidents for logical memory, three tests of attention including the cross-out, three lists for controlled and uncontrolled association, whole-parts, genus-species, and opposites, one list for imagination, one for linguistic invention, the heat test for suggestion, and ten true-false syllogisms for judgment. Later five other tests were added—a cause-effect list, dot counting, progressive weights, comparison blocks, and mechanical ability. The correlations of all these tests with college grades were worked out, and were on the whole very low. However a truly significant correlation of 0.31 was found between the combined scores of the cancellation test, the opposites test, the logical memory test and the judgment tests with college grades, and adding to these four the rote memory test and another cancellation test, and the correlation became 0.37. Here apparently was another early form of the general intleligence test.

W. V. Bingham at Dartmouh reported in 1916 the results of 10 tests upon 200 freshmen, nearly all given individually—the endurance, of grip, tapping, discrimination, of lifted weights, memory span, logical memory, cancellation, color naming, logical relations, perception of form and suggestibility.

In 1916, Thorndike proposed 8 tests—completion, opposites, learning pairs, recognition of forms, marking false statements, addition, following directions, and selective judgments and devised a single test of 20 minutes, consisting of all these eight in series.

Bell used 9 tests at Texas; King 4 at Iowa; Kitson 16 at Chicago; correlations with college grades ranging from 0.31 to 0.47 indicate the degree of refinement, usability, and increasing accuracy of these various tests as this Middle Period drew to a close in 1917. A new era in intelligence measurements grew out of the participation of America in the World War, for out of it came the General Intelligence Group Test.

MODERN PERIOD

In the summer of 1916 a group of psychologists met at Vineland, N. J., to plan a series of intelligence tests which would separate the multitudes of drafted men into groups—privates, non-commissioned officers, commissioned officers, etc. The result was a series of eight tests combined into one, and this one was the famous Army Alpha, which has been given to hundreds of thousands of individuals. Army Alpha consists of the following:

1. Oral directions	counting 12 points
2. Arithmetic problems	counting 20 points
3. Practical judgments	counting 16 points
4. Synonyms-antonyms	counting 40 points
5. Disarranged sentences, true-false	counting 24 points
6. Number series completion	counting 20 points
7. Analogies	counting 40 points
8. Information	counting 40 points

The sudden ending of the war returned hundreds of trained psychologists to their schools, and their activities have made possible the most interesting, pertinent, and hopeful chapter in recent American education. Army Alpha has been used in thousands of tests, and tens of thousands of high school and college students have been scored. The Modern Period opened then 4 years ago with the widespread use of Army Alpha; since then other General Intelligence Tests have appeared—the National, a very fine new one, the Terman, the Thurs-

TABLE I.—SHOWING THE MEDIAN SCORES OF TESTS WITH ARMY ALPHA AT VARIOUS INSTITUTIONS AND WITH VARIOUS GROUPS OF STUDENTS

Institution	Numbers tested			Class	Medians		
	Men	Women	Both		Men	Women	Both
Yale	400	...	....	Freshmen	157.3		
Oberlin	137	193	....	Freshmen	153	145	
Massachussetts Agricultural	154	...	....	....	150		
University of Illinois	...	...	3500	All	.....	.....	143
Brown	210	...	....	Freshmen	142		
Colorado College	148	178	....	....	142	142	
Notre Dame	...	...	321	All	.....	.....	137
Johns Hopkins	140	...	....	Freshmen	137		
Rutgers	358	...	....	....	138		
Ohio State	...	...	5960	All	.....	.....	136
St. Cloud Normal	...	...	....	....	.....	.....	135
Winona	...	...	....	....	.....	.....	134
Kansas State	...	...	....	....	.....	.....	132
North Dakota University	...	117	....	....	.....	129	
University of Minnesota	534	354	....	Freshmen	129	128	
Hamline	61	145	....	....	129	133	
Illinois Northwestern University	50	341	....	All	128.3	128.2	
Purdue	...	...	1152	All	.....	.....	127.9
Southern Methodist University	162	159	....	All	127	123	

tone, etc. An amazing development has come in 4 years, but those who have studied the problem most indicate that we have just nicely reached the stage of side-delivery mowers, wire-band harvesters, and wax-cylinder phonographs in this new field of intelligence testing.

Among the many pioneer experiments with Army Alpha, Table I shows a number of those which stand as most interesting and valuable.

Table I reveals several problems important in the extreme to high school and college workers—why the wide variation between different institutions, between institutions in different sections, between private institutions and tax-supported schools, and between men and women students? Do Yale and Oberlin attract students of distinctly superior ability or students of distinctly superior ability to think along the lines which are tested by the Army Alpha? Are there other types of mentality which are worth the training in higher institutions? A host of similar problems grew out of these first college tests by Army Alpha.

One table taken from the tests of 3500 students at the University of Illinois reveals the wide variation in individual capacity and the tremendous overlapping in mental abilities. School people have recognized as one of their unsolved problems this tantalizing spread of mental ability in the different grades of the elementary school and the high school. In ordinary school situations, each fifth grade contains some pupils no better than second grade children and others as good as eighth grade pupils, each eighth grade varies from fourth grade to high school senior ability, and each senior class in high school varies from eighth grade to college junior ability. Table II shows that the universities have precisely the same problem of overlapping.

TABLE II.—HIGHEST AND LOWEST SCORES AT THE UNIVERSITY OF ILLINOIS TO SHOW THE OVERLAPPING OF MENTAL ABILITIES

	HIGHEST	LOWEST
Senior class	206	79
Junior class	206	49
Sophomore class	206	46
Freshman class	198	41

For those who despair for the future of American scholarship on account of the hordes of incoming students at high school and college, there is much of assurance in Table III. Whatever their shortcomings in other directions, in mental ability at least, college groups are still very highly selected. The intelligence scores of the drafted men were grouped in seven classes from "Very Superior" to "Very Inferior." Seven and seven-tenth per cent of the drafted men were in the highest class and 3.2 per cent were in the lowest. This distribution represents accurately probably the general intelligence of the adult population. Table III sets over against this percentage distribution of the drafted men, the percentage distributions of five groups of college students, and shows conclusively that on the whole "our best" go on to college.

TABLE III.—PERCENTAGE DISTRIBUTION OF THE DRAFTED MEN AND GROUPS OF COLLEGE STUDENTS ACCORDING TO THE SEVEN ARMY CLASSES TO SHOW THE HIGHLY SELECTED CHARACTER OF COLLEGE GROUPS

Class	Designation	Range of scores	Drafted men, per cent	Two Infantry regiments, per cent	Hamline men, per cent	Hamline women, per cent	Purdue, per cent	Ohio State, per cent	Yale freshmen, per cent
A	Very superior	135–212	7.7	3.5	43	47	41.8	51.5	85.5
B	Superior	105–134	12.7	7.5	41	37	38.8	32.8	13.7
C+	High average	75–104	20.4	13.5	15	15	17.1	13.1	.7
C	Average	45– 74	29.4	21.5	1.6	.5	2.2	2.4	0
C−	Low average	25– 44	19.8	22	0	0	.1	.2	0
D	Inferior	15– 24	6.8	22	0	0	0	0	0
D−	Very inferior	0– 14	3.2	10	0	0	0	0	0

The same fact is strikingly shown in Table IV, a percentage distribution for the 5950 students in the great test at Ohio State. When 15 per cent must be eliminated each year for poor scholarship, other causes are operating than a lack of mental ability. The determination and elimination of these other factors constitute a most serious administrative problem in higher institutions. This table shows that more than 75 per cent are in the superior and very superior groups at Ohio State.

TABLE IV.—QUARTILE DISTRIBUTION OF 5950 STUDENTS AT OHIO STATE UNIVERSITY

Class I—Highest 5 per cent	scored 178–212
Class II—Next 20 per cent	scored 155–177
Class III—Middle 50 per cent	scored 115–154
Class IV—Next 20 per cent	scored 85–114
Class V—Lowest 5 per cent	scored 0– 84

Another highly intricate problem has arisen from the determination by the Alpha tests that intellectual abilities vary greatly among the students of the different professional colleges and schools within the same institution. Table V shows this variation of median scores at four institutions, and opens the whole question of school and professional guidance.

TABLE V.—MEDIAN SCORES FOR DIFFERENT SCHOOLS AND COLLEGES WITHIN THE SAME INSTITUTIONS, SHOWING DIFFERENCES IN INTELLIGENCE LEVELS

Colleges and schools	Institutions			
	Ohio State	Illinois	Purdue	University Arkansas
Arts, commerce, and journalism	147			
Arts and sciences	...	147	...	118
Commerce	...	140		
Medicine	142			
Engineering	141	140	...	136
Chemical	...	...	135.8	
Civil	...	...	135.4	
Electrical	...	...	132	
Mechanical	...	...	129.6	
Agriculture	133	139	125.8	112
Arts	133			
Education	133	121	.....	114
Pharmacy	125			
Science	...	...	119.4	
Veterinary medicine	112			
Dentistry	115			
Graduate	157	150		

INTERPRETATIONS

Wisest investigators counsel school men to be very slow in accepting broad generalizations or in basing specific school programs upon the results of these intelligence tests. The data are too few, the sampling not sufficiently comprehensive, too few institutions have reported their results, too brief a time has been allowed for experimentation and development, and the conditions of testing and scoring have varied too widely.

Certain interpretations however may be permitted. In the first place, college groups are highly selected—80 per cent of college students come from the most intelligent 20 per cent of the population. In the second place, there is a wide variation between different institutions, between institutions in different sections, between colleges and schools in the same university, and between individuals in the same class. Moreover there is a wide overlapping of intelligence—some eighth grade pupils make better intelligence scores than college freshmen—better than college seniors.

Each class median is higher than that of the class immediately below it—due either to mental growth or to constant elimination of the least intelligent. Higher qualities of intelligence are within the control of institutions, as reflected by the freshman scores at Yale and Oberlin. American high schools prepare as adequately for college as private schools, if tests at Yale may be accepted. It might be more accurate to say that students preparing for college in American high schools have as high intelligence as the group preparing for college in the private institutions.

The tests appear to be as accurate as teachers' marks and estimates; they afford a powerful motivation; and they give to student advisers a new line, a good starting point in college and life guidance, and a valuable "diagnosis of academic maladies" and a prediction of probable success in college. They cannot be a substitute for the high

TABLE VI.—CORRELATIONS BETWEEN INTELLIGENCE SCORES AND COLLEGE MARKS

Institution	Number of students	Comparisons	Correlations
Yale	373	Alpha and freshmen marks	.38
Brown	210	Alpha and college marks	.44
Southern Methodist University	159	Alpha and college marks	.52
Hamline	145	Alpha and college marks	.47
Illinois State Normal University	379	Alpha and college marks	.48
University of Arkansas	304	Alpha and average university grades	.49
Dartmouth	...	Alpha and faculty ratings	.56
Dartmouth	...	Alpha and freshman marks	.43
Stanford	313	Group tests and S. A. T. C. marks	.31
Columbia	...	Entrance examinations and first semester marks	.43
Columbia	...	School record and first semester marks	.45
Columbia	...	Regents examinations and first semester marks	.57
Columbia	...	Psychological examinations and first semester marks	.59
Columbia	...	Psychological examinations and first year marks	.60
Brown	Class 1922	Alpha and 2 years college marks	.46
Brown	Class 1923	Thorndike and first semester marks	.53

school record, but they furnish a good supplement to it, and may become a useful addition to the machinery of admission. On the whole they appear to be most useful at present in detecting those who lack the absolute minimum intelligence for work of passing grade.

On the other hand, the Alpha test is not adequate, since it was designed for a purely military purpose; for that reason doubtless men have surpassed women everywhere. Students should not be excluded from college on the basis of the tests alone, for it would result in injustice to many—probably 10 per cent of those excluded. Finally the tests are incomplete measures since a multitude of qualities besides intelligence contribute to academic and life success. We must look in part to other measures than those of pure intelligence.

Since a large proportion of the intelligence testing was for some time conducted at the universities and colleges, a great variety of valuable correlations have been worked out between intelligence scores and college marks. Table VI shows the results of a number of these studies.

Table VII, prepared by Terman, shows the correlations between high school records and college entrance examinations on one hand and college marks on the other. The highly significant fact is revealed by a comparison of Tables VI and VII that the correlations between the high school marks and college marks are but little higher than the correlations between the Alpha scores and college marks. In other words a test that may be given in an hour and scored in a few minutes has as high predictive value as the high school record or the exhaustive entrance examinations.

TABLE VII.—CORRELATIONS BETWEEN HIGH SCHOOL RECORDS, ENTRANCE EXAMINATIONS AND COLLEGE MARKS
After Terman

Institution	Comparisons	Correlations
Iowa........................	Four years high school and four years college	.53
Arkansas........................	Four years high school and four years college	.54
Columbia........................	Four years high school and first year college	.63
Texas........................	Four years high school and first year college	.69
Stanford........................	Four years high school and two to four years college	.54
Harvard........................	College entrance examinations and first year college	.47
Harvard........................	College entrance examinations and second year college	.41
Columbia........................	College entrance examinations and first year college	.62
Columbia........................	College entrance examinations and second year college	.50
Columbia........................	College entrance examinations and third year college	.47
Columbia........................	College entrance examinations and fourth year college	.25

PROMISE AND LIMITATIONS OF INTELLIGENCE TESTS

By methods more or less imperfect an evaluation of ability to do intellectual work is being developed. By the examination of many data, approached inductively, objective measures are taking the place of subjective opinion in estimating student ability. Combining intelligence scores with all other good measures, the exceedingly high correlations of 0.75 to 0.80 are obtained between these measures and school marks. The intelligence scores have shown themselves our surest guides in detecting the very highest and the very lowest in intellectual ability. And finally on the whole we know that those who score high in the tests will earn high marks and those who score low in the tests will receive low marks in scholarship.

Set over against the rosy implications of the preceding paragraph the honest advocate of intelligence testing is compelled to admit several important limitations. In the first place, we are reasonably sure that intelligence cannot at present be accurately and absolutely measured. While most valuable for educational guidance in some subjects, the tests are apparently useless in others. Occasionally men of high intelligence fail to make good scores, and on the other hand, men of low or moderate intelligence make excellent scholarship records. Therefore other measures are required to determine certain non-intellectual factors—energy, industry, habits of work, moral character, stability, health conditions, temperament, ideals, earnestness, will-to-win, and many others. Although surprisingly accurate in sorting into broad groups, the tests are still unsafe in individual cases, and therefore they cannot be used alone by school officials for purposes of promotion, graduation, admission to college, or elimination.

ATTITUDES TOWARD CURRICULUM MAKING AND SECONDARY SCHOOL OBJECTIVES

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(*A*) SELECTION OF SUBJECT-MATTER, AND OF OBJECTIVES, INSEPARABLE

It is impossible to think of curriculum making apart from curriculum administration. It is equally impossible to outline and formulate curriculums apart from consciously recognized objectives. In the past, many of the aims of education have been too vague and general to be of the largest practical value. Ideals have been set up without respect to fundamental activities and experiences of the individuals to be educated.

There has been a definite attempt during recent years to recanvass the whole long list of aims which have been set forth by writers of educational treatises extending from the time of Plato to the time of Comenius and thereafter. In this more recent endeavor to make a reinventory of aims, one of the main purposes has been to point out the need of supplementing the earlier more or less vague objectives with additional specific ones which are evolved out of the activities of the present day social order. Furthermore, it is believed that there are numerous specific objectives intimately related to large general outcomes which should be consciously recognized by high school officers who formulate curriculums, and by teachers who are responsible primarily for the presentation of subject-matter. Certain universal and common objectives, as well as more immediate ones, have been widely agreed upon as applicable to high school work.

There is a universal feeling among progressive school people that all high school subjects are in need of reorganization. This need is due to the fact that society is never static. Nor are any of the factors relating to the needs of society, or to the nature of pupils to be educated, ever static. In the planning of secondary school curriculums it is absolutely essential to real progress that objectives be clearly recognized. Otherwise in our efforts to reorganize subject-matter the outcome will be mere educational chaos and confusion. The first step therefore is a clear statement of objectives in terms of present day needs of pupils, and in terms of the society in which they live. The second step is to provide for an adequate time allotment in the high school program of studies for realizing definitely the objectives set up.

(*B*) ENUMERATION OF OBJECTIVES

N. E. A. Objectives.—Perhaps the most widely read list of objectives published at the present time is that outlined by the National Educational Association Committee on the Reorganization of Secondary Education. These, as enumerated by this Committee, were seven in number: (1) Health, (2) command of fundamental processes, (3) worthy home membership, (4) vocation, (5) citizenship, (6) worthy use of leisure and (7) ethical character.

These objectives were determined through an analysis of the activities of individuals. These activities are found within various groups. Three of these groups which demand special attention are the family, civic and vocational, according to the above committee. Hand in hand with these three specific duties of life are to be developed the tool processes, worthy use of leisure time, physical vitality, and moral practices. The different aspects of this partial but suggestive list of objectives are intimately interrelated.

Above it has been stated that first it is necessary to recognize clearly objectives, and secondly to attempt to apply these objectives to the subject-matter used through provision for time allotment. In conjunction with these two steps it is all important that principles relating to the differentiating and unifying functions of secondary education be consciously recognized. The demands and requirements of the two cycles, units or phases of the junior-senior high schools of America are somewhat different. In the Junior cycle the chief problem is differentiation of subject-matter largely within a constants-with-variables curriculum or some other type. In the senior cycle, there is the additional problem of providing more fully for differentiated curriculums usually within the comprehensive or cosmopolitan type of school.

Viewpoint in Terms of Specific Objectives.—Professor Bobbitt has outlined the most extended list of specific secondary school objectives available. His list is more inclusive than that of the N. E. A. Committee. It is as follows:

1. General physical efficiency (play-work-level).
2. Mental efficiency (play-work-level).
3. Unspecialized activity of production, distribution and conservation and consumption (play-work-level).
4. Specialized calling.

5. Citizenship.
6. Social relations (play-work-level).
7. Social intercommunication (language and other modes) (play-work-level).
8. Religious attitudes and activities.
9. Parental responsibility.

One difference between his list and that of the N. E. A. Committee is apparent. Education for "leisure" is carried along throughout the nine divisions rather than used as a separate objective. The work and play elements vary in emphasis in relation to the different objectives. The largest contribution of Bobbitt appears in connection with the very extensive array of specifics outlined under such categories as "health and physical fitness," for example. Illustrative of one specific objective is the following:

1. "The ability to make one's food contribute in maximum measure to one's physical well-being." To this one are added 37 other definitely outlined abilities. Furthermore, this ability to make one's food contribute maximally is analyzed into 48 different types of habits, skills, knowledges, dispositions, and understandings. The above specifics represent suggestive samplings of what can be done in other secondary school objectives, namely, vocational, civic, etc.

As Bobbitt suggested, the value of predetermination of outcomes in the economic world is self-evident. The value of such predetermination in secondary education is now also conceded. The application of school objectives must necessarily differ somewhat in different localities. The specific needs in various communities relative to vocational and civic objectives can be discovered scientifically through extensive analytic surveys of activities and occupations. With detailed and extensive lists of specific objectives of this sort in mind formulators of curriculums need not proceed in any vague fashion. Perhaps the chief difficulty to be faced is the overwhelmingness of the task. The feasibility of making analyses of occupational activities has been demonstrated in the surveys carried on in a number of large cities. This procedure lends itself readily to some of the newer subject-matter in terms of vocational subjects and the social sciences, including perhaps many phases of the natural sciences. The task is somewhat more complicated when the more traditional school subjects are considered. We are gradually becoming conscious, however, of the fact that the aims and objectives of the academic high school subjects must be redetermined also, and so far as is practicable broken up into specifics.

North Central Association Unit Curricula Committee Objectives.—The unit curricula committee of the North Central Association has made during the past few years several tentative reports relative to standards in the reorganization of secondary school curricula. This committee has considered the aims of secondary education under two heads, namely: (1) The ultimate goals toward which educational efforts are directed and (2) the specific and immediate aims as related to the selection of subject-matter.

The ultimate aims are considered in terms of the development of dispositions and abilities of pupils in terms of four large aims, namely: (1) Health, (2) leisure, (3) vocational and (4) social. Or, in other words:

1. The maintenance of health and physical fitness.
2. The use of leisure time in right ways.
3. The successful engagement in vocational activities.
4. Successful activity in domestic, community and civic relationships.

The immediate aims are stated in terms of acquiring knowledge and developing attitudes. These explicitly stated immediate aims are intimately connected at all points with the ultimate aims. This committee summarized the immediate aims thus:

1. Acquiring fruitful knowledge.
   (*a*) Preparative to acquiring other knowledge.
   (*b*) Knowledge which functions directly in developing dispositions and in discovering and developing abilities.
   (*c*) Knowledge useful in control of life situations.
2. Development of attitudes, interests, motives, ideals and appreciations.
3. Development of definite mental techniques in such processes as perception, memory, imagination, judgment.
4. Acquiring right habits of conduct and useful skills in living.

With these ultimate and immediate objectives clearly in mind, the next problem is to select subject-matter which will be most suitable in realizing the respective aims consciously chosen. Several years ago the Iowa State Teachers' Association published a widely read report similar in viewpoint to that of the North Central Association Committee on standards for unit curricula here outlined. In this report can be found subject-matter suggested under different high school subjects in terms of the ultimate and immediate objectives above described.

It is assumed by both the I. S. T. A. and also the N. C. A. Committee "that there are certain common needs of all high school students which must be met by certain subjects and types of subject-matter common to all curricula." Differentiation of subject-matter in order to meet the needs of individuals within and between groups is also necessary. This adaptation of subject-matter to pupils may be made either in a 6-year unit of secondary education, or in a two-cycle junior and senior high school unit, depending upon local conditions.

Sociological Determination of Objectives.—Professor Snedden has suggested that the aims of education should be determined on the basis of sociological analyses. To quote verbatim he writes "We can have no satisfactory set of working principles in the construction of curricula until we possess fairly acceptable analyses, qualitative and quantitative, of the value of social life." In such analyses the relative values of health, knowledge, beauty, sociability, etc., will need to be reliably determined.

His attitude toward the determination of objectives through surveys is clearly set forth in the following words: "It was only when objective sociological studies of the conditions surrounding the work of men and women in actual vocational practice were instituted that the promoters of vocational education found themselves on sound ground. Surveys were begun with a view to obtaining reasonably correct answers to such questions as these: What are the various vocations now followed in a given community? How many workers in such? When, where, and how did these acquire the competency they now possess?" . . . "For the present the situation is one of confusion. The historic studies, deeply rooted in custom, and frequently popular in approval, exhibit as yet few changes even in progressive junior high schools. The new studies encounter opposition because their actual objectives are as yet so ill-defined."

There is general agreement with him that any consideration of the junior high school curriculum bears directly on the question of educational aims. In the name of what goals, for instance, are we to offer Latin, grammar, geography, history, mathematics, and other subjects? Are these subjects equally worth while to all individuals? Is it desirable that all pupils in the junior high school be required to pursue similar studies for full or part time of the years covered by the junior high school?

In the spirit of his discussion, then, specifically what are to be the objectives of mathematics, of physics, of fine arts, of graphic and plastic arts, of history and of other subjects offered either in the junior or senior high school? Scores of unpublished manuscripts have been written in attempts to formulate a statement of reorganized social sciences. A large number of magazine articles and books are now beginning to appear containing this new material. Numerous statements also are already available, too, in the fields of English, mathematics, and natural sciences, containing a new set of objectives and corresponding new materials for high school instruction.

Correlation between Aims and Activities.—Several years ago Professor Inglis wrote that "The key to any analysis of aims in education is to be found in an analysis of the activities of life in which people do or should engage." There are three groups of activities involved: (1) Those relating to participation in citizenship included in the social-civic aim; (2) those relating to economic production and distribution, included in the economic-vocational aim; (3) those relating to free use of leisure time, included in the individualistic-avocational aim. As is true in the instances of afore-named aims according to other writers there is here an interrelation of all of these three aspects in the generic social aim of education.

All of these three aims together with their corresponding functions, adjustive, integrating, differentiating, propædeutic, selective, and diagnostic must be considered in the formulation of curriculums. The basis for a single line curriculum, or other types and the bases for differentiated curriculums must be consciously considered.

It is necessary in the light of such aims to determine what subjects shall be included for the pupils, as Inglis suggests. There is general agreement without exception that English should be included in both the junior and senior high, as well as physical education, with some social and natural science perhaps. In addition to determining what subjects shall be commonly studied by all pupils it is necessary to reevaluate the aims of each subject and therefore to reorganize the nature of much of the subject-matter offered under each school subject so as to conform to the redetermined aims.

(*C*) SAMPLINGS OF ADAPTATION OF SUBJECT-MATTER TO OBJECTIVES

It is obvious that there are some differences in the methods of procedure used by different persons in determining the objectives of secondary education. But at the same time it is significant that in two respects the procedure relative to the above enumerated objectives is similar. In the first place secondary school objectives have been determined by, and evolved out of, life-time activities of individuals. In the second place, there has been a constant effort to definitize and make specific numerous sub-objectives to which all subject-matter offered in the school is to be adapted and related. It ought to be clear that this does not mean that all of the ideals set up by educators in the past have been ignored. It does mean, however, that only those ideals which can be carried out as objectives in terms of life-time activities, concretely and specifically, do have real functional and educational value. In the words of Professor Charters, "The curriculum is derived from both ideals and activities. Virtue, swift-footedness, piety or social efficiency must be set up in a system of education: But in order to select the material to which these shall apply it is absolutely essential for the teacher to know the activities, problems, thoughts, or needs in connection with which these ideals are to operate . . . The curriculum by which he is trained to perform the important activities of the group in accordance with the highest ideals is necessarily based upon both activities and ideals. And obviously any aim of education expressed only in terms of ideals must fail to function."

Whatever may be the differences in the number and nature of the general categories under which the general objectives have been enumerated there is a striking unanimity of opinion expressed in the instance of such objectives as health, leisure, social, and vocational. Wholesome results are beginning to appear already in the way of new materials published in textbooks, in the way of the work of committees in published bulletins, and in the way of many revised syllabi within the high school departments of progressive school systems.

Without attempting to recommend any absolute single method of procedure, and without attempting to outline any exhaustive amount of subject-matter, there is here given an illustrative sampling of some reorganized or new materials for high school instruction in several representative subjects. In March, 1922, at the Chicago meeting of the North Central Association, the Committee on English representing the Commission on Unit Course and Curricula made a tentative but significant report. The Committee divides English into the two subjects of language-composition and literature-reading. The aims of composition and of literature, as stated, respectively, are similar to the aims set forth by the Committee on Reorganized English in Secondary Schools in 1917; namely, ability to communicate ideas to others, and ability to understand, feel and appreciate ideas of others.

Certain guiding principles are outlined by the Committee. Not less than five units are to be offered in Grades VII to XII, with additional electives either in the eleventh or twelfth grade. Literature and composition are to be taught in separate courses. Language-composition work is to be correlated with all of the other high school subjects, which involves oral expression, grammar, rhetoric, written expression (including spelling, punctuation, capitalization). Literature-reading touches all content subjects of the high school, which involves oral and silent reading, oral and written discussion, declamation, dramatization, history of literature. Instruction and subject-matter is to be adapted to the individual differences of pupils. Objective measurements are to be used for diagnosing the needs of individuals, and appropriate materials of instruction to be determined. As early as Grade VII the language habits of all pupils are to be investigated so that instruction may be given at the proper level.

Some writers have criticized the earlier report of the Committee on Reorganized English in Secondary Schools (1917) for stressing too little the recognition of language as an instrument and tool of thought. The Committee of 1922 perhaps goes little farther, if any, in its statement of the aim of composition than did previous committees on this point of the value of language as a vehicle for individual thinking. When, however, one contrasts the nature of the composition work outlined by the Committee of 1922 with the over-formalized composition work, and with the hyper-classicized literature work of the last quarter of the nineteenth century in American colleges (Harvard, and Yale, and state universities) and secondary schools, the work of this recent committee represents considerable reorganization, especially in language-composition. Of course during the last quarter of the nineteenth century the colleges through their entrance requirements determined chiefly the nature of the English work to be offered in secondary schools. The Committee's report on English in March, 1922, raises the question, "Shall the North Central Association formulate college entrance requirements of its own to meet the special requirements of North Central secondary schools and colleges?"

The following is a brief resume of the nature of the composition work recommended by the recent Committee on English for Grades VII to XII inclusive: In Grade VII materials are to be based on the pupil's play and work, on scenes, objects, occupations observed, books read, with formal compositions discouraged. In Grade VIII, civic problems, characters admired in books and life, actual and imaginary journeys are to be used. In Grade IX, vocational topics in particular are to be added. Drill work in letter writing, spelling, word structure, and punctuation are not to be discontinued. In Grade X the wide range of new school studies, and of new social relations should be recognized. Paragraph building and sentence manipulation is stressed. In Grade XI the work should become more definitely technical. Literary effect, outlines, themes, debates, editorials studied and produced, with increased wealth of material, organization and technique. In Grade XII, permission to follow up pupils' special interests should be given, as for example, newspaper work, short story, debating, scientific description, etc. The grammar work has been materially reduced through the seventh, eighth, and ninth grades, but cares for the essentials, and in the main is presented from the functional standpoint. It should be added that the committee recognized seven objectives to be attained by pupils at the end of Grade VI: Namely, correct expression, avoidance of gross errors, letter-composition, spelling of own vocabulary, silent reading ability and reproduction, intelligent reading aloud, understandingly to quote short poems.

The above material is distinctly different than was the over-formal course outlined in the 70's in one state. The following 4 years' work in English was recommended by the Iowa State Teachers' Association:

> First year: English grammar and analysis, first term; rhetoric analysis, and composition, second term; the same, third term; elocution alternating with music and drawing.
>
> Second year: Elocution alternating with drawing, music, and bookkeeping.
>
> Third and fourth years: Continuing much in the same way.

Two questions may be raised at this juncture. Shall we recommend 5 or possibly 6 years of English as such? Or is it possible to combine English largely and definitely enough with one or more other subjects to bring about some economy of time? Is it possible to combine English, for example, with community civics in such a vital way as to result in economy of time? If English is combined with social and civic problems what influence would this have on the literature-reading content as outlined by the English Committee of 1922?

Several comments are here offered relative to the Literature-reading of the Committee on English. In Grade VII a number of the objectives of secondary education as outlined by the N. E. A. committee have been recognized. To quote, "For the general reading in this and the following grades there should be provided a wide range of books, papers, and magazines dealing with wholesome living, worthy home membership, vocations, citizenship, the worthy use of leisure, and right conduct. Poetry, fiction, science, art, ethics, civics, sociology, history, biography, travel, should be included." Whether the actual list of reading outlined by the Committee for each of the grades is such as to be fully applicable to such an objective as Professor Inglis calls social-civic, is debatable. According to him literature subject-matter should serve as an integrating factor or element, and social science readings serve admirably for this purpose. In Professor Inglis's words, "Literature is to be conceived as a social-science in the secondary school." Space does not permit a detailed enumeration of the list of readings for each grade. With the exception of the Committee's quotation already given referring to readings in civics, history, etc., the remaining list of readings is perhaps too overweighted with the traditional classics and masterpieces to be readily applied to such an objective as the social-civic. The following are excerpts of the typical readings suggested for the respective grades: In Grade VII, shorter poems of Longfellow and Whittier, etc.; In Grade VIII, short poems of Holmes, Riley, Field, etc.; in Grade IX, The Lady of the Lake, Julius Caesar, etc.; In Grade X, the Vision of Sir Launfal, Ulysses, As You Like It, etc.; in Grade XI, The Idylls of the King, Macbeth, Macaulay's Essays; in Grade XII, a number of courses suited to pupils' aptitudes, in terms of drama, novel, short stories, essays, etc.

A somewhat different viewpoint from that expressed in the report of the Committee on English in March, 1922, though in some respects identical with it, is the experiment in the University of Chicago High School. The experiment has had to do with the correlation of English with one subject in particular, namely, community life.

The objectives of this social-science English have been clearly stated by Mr. Hill. Two of these aims are chiefly civic in nature; namely, the arousal of the desire in pupils to participate in the activities of their groups, and to acquire knowledge of social life enabling them to participate more efficiently. Two of these aims are primarily related to English; namely, the inculcation in pupils of habits of wide and meaningful reading, and the stimulation of clear and effective oral and written expression. A fifth combination objective emphasizes the arousal of intellectual interests.

The material suggested below is applicable in particular to the two aims in terms of English as suggested above. The organization of the course in general consists of four parts: Group life, community problems, industrial society, government and politics. Three types of readings are arranged: (1) Study references; (2) history, biography, travel, and essay; (3) imaginative literature—fiction, short story, poetry, drama. It is obvious that the readings outlined under this plan are much less of the traditional type than those outlined in the main by the Committee on English. However, it should be remarked that The Bluebird, Snowbound, The Courtin', and Enoch Arden, are some of the selections that are found under each plan. About half of the total readings outlined in this plan of combining English and community life have to do with the imaginative literature aspect. Consequently the content embodied in the earlier plans using the traditional literary masterpieces is not lost sight of in the combination plan.

A third procedure somewhat different from either the plan of the Committee of English of March, 1922, or from the combination plan above discussed is the plan of the Iowa Teachers' Association report and also the plan of the Committee of the Unit Curriculum of the North Central Association. The plan here involved is first a statement of ultimate, and then of immediate objectives in detail, and next to outline typical subject-matter which will lead to the realization of these objectives.

In March 1922 the Committee on Standards for use in the reorganization of secondary school curricula made a tentative report before the North Central Association of the Chicago meeting. Professor Stout, Chairman, made the following statement: "It is obvious that a clear determination of objectives is always fundamental in the process of curriculum making. It is also evident if these objectives are to function properly they must be stated in terms sufficiently definite to serve two purposes: (1), As standards by which accurate evaluation can be made of material now in use and (2), as criteria for determining constructively necessary change in subjects, subject-matter and organization."

Because of lack of space only two objectives, namely "the disposition and ability to use leisure time in right ways," and "the disposition and ability to sustain successfully certain definite social relationships" will here be set forth as illustrative of the method of procedure.

Leisure time as here used refers to the employment of time as harmless enjoyment, and also to the employment of time in a somewhat constructive way in all sorts of avocational activities aside from one's vocational work. The following is a partial outline of the

LEISURE TIME OBJECTIVES[1]

- I. Ultimate Aims—the disposition and ability
  - (*A*) To express in leisure time activities the nobler emotions, such as courage, altruism, æsthetic feeling, reverence and loyalty to one's home, community, and country.
  - (*B*) To secure wholesome recreation and relaxation through games, sports, travel, good literature, the fine arts, conversation, and hobbies.
  - (*C*) To be socially helpful through avocational activities in the home, church, and community.
- II. Immediate objectives in terms of
  - (*A*) Acquiring fruitful knowledge.
    - 1. Preparative to acquiring other knowledge
      - (*a*) Elementary knowledge of nature and her laws, essential to general intelligence as related to an understanding and appreciation of physical environment.
      - (*b*) Acquaintance with great artists, sculptors, composers, writers, and their works, essential to participation in social affairs on the level of leisure time activities.
      - (*c*) Knowledge of social facts secured through a study of civics, geography, history, economics, and sociology, etc.
      - (*d*) Knowledge of the applied sciences such as mathematics, and the manual arts, propadeutic to other knowledge, immediately useful in leisure time situations.
    - 2. Knowledge which functions directly in developing dispositions and in discovering and developing abilities.
      - (*a*) Games and sports, through acquaintance with types, rules, and purposes thereof.
      - (*b*) Travel, through acquaintance with
        - 1. Purposes of travel.
        - 2. History, traditions, arts, occupations, and customs of peoples.
        - 3. Best modes and conveniences of travel.
      - (*c*) Good literature, through acquaintance with standard writers, and their works, past and present.
      - (*d*) The fine arts, through acquaintance with
        - 1. Color proportion and arrangement of design.

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[1] Professor Webb and the writer, together with a seminar group of graduate students spent several weeks in making an analysis of leisure time objectives. These objectives were canvassed by Professor Stout and the rest of his committee.

2. Architecture, sculpture, decoration, landscaping, paintings, and drawing.
3. Music, drama, and pageantry.
4. History of the fine arts.
5. Biographies of artists.

APPLICATION OF IMMEDIATE LEISURE OBJECTIVES TO SUBJECT-MATTER OF FINE ARTS

(Only several examples are here used for illustrative purposes)

I. The immediate objective:
  (*A*) Acquiring fruitful knowledge:
    2. Knowledge functioning in developing dispositions and abilities.
      (*d*) Fine arts,[1] through acquaintance with

Architecture: Selected list of pictures, such as the Milan Cathedral, the Cologne Cathedral, Lincoln Memorial at Washington, St. Mark's Cathedral, the Taj Mahal.

Sculpture: The Moses, the Apollo Belvidere, the Winged Victory, the Wrestlers.

Decoration and Landscaping: Current periodicals.

Paintings: Raphæl's Transfiguration, Michæl Angelo's Last Judgment, Titian's Assumption, Fra Angelico's Angels, Reubens' Descent from the Cross, The Angelus.

Music, Drama, and Pageantry: Operas such as William Tell, Il Trovatore, The Twilight of the Gods. Oratorios such as Handel's Creation.

(A partial outline also of the "social objectives" is here given)

SOCIAL OBJECTIVES[2]

I. Ultimate Aims—the disposition and ability.
  (*A*) To have due personal regard for the rights of others in all personal contacts and relationships and a proper sense of social obligations.
  (*B*) To recognize the proper relationships of individuals within a single group.
  (*C*) To recognize the proper relationships of one group to another.
  (*D*) To be socially efficient through participation in varied modes of group activities.

II. Immediate Aims:
  (*A*) Acquiring fruitful knowledge.
    1. Preparative to acquiring other knowledge.
      (*a*) Acquaintance with events, persons, movements, customs, and institutions which have determined the progress of mankind.

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[1] Mr. Foster suggested the above subject-matter in both Fine Arts and English to be used in realizing certain objectives set up.

[2] Mr. Fowler submitted material on the social objectives for consideration by the Committee.

- (*b*) Familiarity with sources of social facts and phenomena.
- (*c*) Knowledge of methods of using historical and other general reference material.
- (*d*) Knowledge of the social implications of subject-matter.

2. Knowledge which functions directly in developing dispositions and in discovering and developing abilities.
    - (*a*) The biographies of great historical figures and significant facts about lesser leaders.
    - (*b*) The social, economic, and political influences which underlie historical movements, conflicts, and institutional developments.
    - (*c*) The arts, customs, manners, and occupations of mankind in the past and present.
    - (*d*) Knowledge of one's own needs and capacities as measured by social standards, relating to in-groups and out-groups.
3. Knowledge useful in control of life-situations.
    - (*a*) The operation of the principle of cause and effect in social phenomena.
    - (*b*) The social forms and practices required by the established social order.
    - (*c*) The value of various types of social organization, the function of these, and procedure to be followed in their management and control.
    - (*d*) The necessity of information as a basis for sound judgments and appreciations of social values.
    - (*e*) The social significance of typical vocational and avocational activities.
    - (*f*) The value of friendships and associations.

(*B*) Development of attitudes, interests, motives, ideals and appreciations: Openmindedness, steadiness, reverence, friendliness, cheerfulness, readiness to cooperate, respect for authority, unselfishness, sympathy, tolerance, service, truthfulness, loyalty, love of the beautiful.

APPLICATION OF IMMEDIATE SOCIAL OBJECTIVES TO SUBJECT-MATTER OF FINE ARTS, AND ENGLISH[1]

I. The immediate objective:
- (*A*) Acquiring fruitful knowledge.
    1. Preparative.
        - (*a*) Acquaintance with events, etc.

Pictures: Famous historical structures such as the Coliseum, St. Peter's, The Pantheon, Palace at Versailles. Famous Historical places such as the Forum, the Acropolis, the Monument at Waterloo. Famous historical scenes such as the Retreat from Moscow, Washington Crossing the Delaware.

Portraits and Statuary: Such as Charles I by Van Dyck, Augustus Cæsar.

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[1] Mr. Foster suggested the above subject-matter in both Fine Arts and English to be used in realizing certain objectives set up.

(*B*) Development of attitudes, interests, motives, ideals and appreciations.

1. *English.*
2. *Dramas:* Merchant of Venice, The Auctioneer, The Bluebird.
3. *Orations and Addresses:* Lincoln's Second Inaugural Address, The New South, Webster's Orations.
4. *Poems:* Pippa Passes, A Man's a Man for A' That, Breathes There a Man, etc.
5. *Fiction:* The Man without a Country, If Winter Comes, The Enchanted Canyon.
6. *Non-fiction:* A Daughter of the Middle Border, The Promised Land, Adventures in Contentment.

It is evident from the foregoing discussion that there is an increasing attempt on the part of school people at the present time to outline secondary school objectives in detail, and, furthermore, an effort to relate the subject-matter of curriculums to these objectives. In most instances we have gone little further than to suggest through illustration the nature and types of the reorganized content. It will be necessary in the next place to state, so far as is possible, these new materials for secondary school instruction in terms of workable units, quantitative and qualitative, and later some sequence of topics. It is axiomatic that unless secondary school teachers are trained to interpret and to present intelligibly these new materials to pupils it will be futile to outline a new body of subject-matter.

Scores of writers are trying their hands at publishing new materials. Book companies and magazine editors are literally flooded, for example with articles relative to the new content for reorganized social sciences. It will take, perhaps, 5 or 10 years to separate the wheat from the chaff. A great amount of new material is now available also in the fields of science and mathematics and other subjects.

Real administrative leadership will be necessary in order to avoid mere duplication of effort in the presentation of such a topic as that of health, for example, treated, respectively, under social science, or community civics or general science, or physiology and hygiene, or within physical education itself offered in connection with indoor and outdoor activities. It is possible, however, for instructors in these different departments to agree upon points of emphasis in the treatment of the problem of health.

The determination of objectives, the selection of subject-matter in the light of these ultimate as well as specific and immediate goals will tend to increase our educational efficiency. The mastery of units of subject-matter under this new order becomes a more appropriate criterion than the length of time spent in school by pupils. Subject-matter applied to objectives evolved out of the activities of pupils will, in large measure, guarantee the functional value of their education. High school curricula in order to have functional value must, of course, exist within high school pupils; they must not merely appear on paper.

A STUDY OF HIGH SCHOOL FAILURES AND THEIR CAUSES

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The rapid increase in the population of the American high school together with the constantly increasing per capita cost of high school education and the modern effort to secure efficiency in the administration of the schools has made it necessary for school officials to direct their attention to means of eliminating all expenditure of money for which the schools can show no results, thus not only reducing to a minimum the unnecessary expenses of education but increasing the efficiency of the school as well. The high school of today as a result of the enactment of more stringent compulsory attendance laws, the demand for better educated citizens, and the enrichment and increase in the number of its courses of study has become an institution that enrolls not only the select few who wish to enter business or the professions but pupils who are destined for all the various activities of our modern complex civilization. All this has resulted in a vast increase in the number of high school pupils. This increase in the number of pupils and the number of courses offered, together with increasing expenses for material equipment and the salaries of teachers and administrative officers has made a decided increase not only in the gross but also in the per capita cost of secondary school education. As the tax payer has been asked for greater sums of money for education, he in turn has become more critical and prone to ask whether or not the money thus given is wisely expended; not whether high school education is worth while, for the American public is firmly convinced that it is, but whether there is not a lack of efficiency in the conduct of high school education.

When the business man would cut down expenses he first inquires into the efficiency of his plant and seeks to discover whether there is any waste that might be eliminated. Likewise, in educational matters, when there is an investigation as to the efficiency the first thing sought for is waste and the investigator is at once face to face with the number of failures among high school pupils and asks for facts concerning these failures.

The following study was undertaken for the purpose of inquiring into the number of high school failures and, by classifying them from various standpoints and noting the facts as revealed by the different groups, to discover if possible, some of the factors that enter into the failure of a high school pupil, in a 4-year high school whose average enrollment during the years covered by this investigation was approximately 300 pupils. There are two groups of pupils included in the investigation. The first includes all those who have entered high school during the 5 years extending from 1913 to 1917 inclusive, with the exception of those who remained in school less than one semester and of whom there was consequently no record kept. The second group includes those pupils who are now in school concerning whom it was possible to get data relative to their mental ability and the amount of time devoted to study.

The facts for this study with the exception of those concerning home study, which were obtained from the pupils themselves, were taken from the official school records. The word failure as used in this paper refers to the non-passing of any subject for a semester.

The writer realizes that the small number of pupils included in the investigation makes it impossible to arrive at any definite conclusions. Moreover scientific investigation requires that the facts used be gathered from various localities in order to obviate the influence of local conditions. The data which are used in this study, having been gathered from one school, are obviously affected by local conditions which will necessarily influence the results to a greater or less extent. Being conscious of all this, it is the purpose of the writer merely to inquire into the failures as they have occurred in this particular community, to point out certain tendencies which are suggested by the study, and if possible to discover some of the causes of the failures. It is hoped that these tendencies and causes as they are indicated may, by comparison, be of some use in a broader and more thorough investigation of this problem.

THE EXTENT OF FAILURE IN HIGH SCHOOL

In the first group of pupils referred to above, namely; those who entered high school during the years from 1913 to 1917 inclusive, there are included 462 pupils. These are classified with respect to the number of pupils failing and show the following distribution.

TABLE I

ENTRANTS	FAILING	PER CENT	GRADUATES	FAILING	PER CENT
462	243	52.6	185	86	46.5

NON-GRADUATES	FAILING	PER CENT
277	157	56.7

The above table suggests an answer to two questions which are pertinent in a study of this kind. First, to what extent do the pupils who enter high school fail? Second, is there a greater percentage of failing pupils among those who leave high school before graduation than among those who graduate? In the preceding classification it will be seen that the whole number who entered high school 185 or approximately 40 per cent graduated. The greater per cent of graduates as compared with the results of the investigations by Strayer, Thorndike, and others can be readily accounted for because of the fact that only those students who remained in high school longer than one semester are here considered.

A study of failures, in the sense of the non-passing of a subject pursued for one semester, and a distribution of these failures according to years in which they occurred, among the graduates and non-graduates results as follows.

TABLE II.—DISTRIBUTION OF FAILURES ACCORDING TO THE YEAR IN WHICH THEY OCCURRED

	1	PER CENT	2	PER CENT	3	PER CENT	4	PER CENT
Total entrants........	220	37.5	188	32.1	132	22.5	46	7.9
Graduates............	19	9.4	65	32.2	84	41.5	34	16.8
Non-graduates........	201	52.3	123	32	48	12.5	12	3.1

The significant feature of the above table is that during the first year a small percentage of failures occurs among the graduates while among the non-graduates more than one-half of the entire number fail during that year. It will also be noted that in the case of the entire number of entrants the percentage of failure is greatest in the first year and gradually decreases from a percentage of 37.5 in that year to 7.9 in the last year. In considering these figures it is necessary however to remember that the number of pupils who remain in school until the fourth year is not more than 45 per cent of those who originally enter school. These pupils who remain until the fourth year are also a selected group since the majority of the weaker pupils have failed earlier and as a consequence have left school. These facts help to explain the decreasing percentage of failures during the high school course and practically account for the decrease.

In order to discover the comparative likelihood of failure during the 4 years in high school the group which includes graduates only should be studied. In this group the smallest number of failures occurs during the first year, followed by an increase in the second and third year and a material decrease in the fourth year. Stating these as percentages we find that 9.4 per cent of all failures in the group of graduates occur in the group of the first year in contrast to 32.2, 41.5, and 16.8 per cent in the second, third and fourth years respectively.

These figures afford us the best basis for the study of the likelihood of failure during each of the 4 years in high school because the pupils in this group all remain during the entire 4 years whereas in the other groups the number of pupils concerned becomes less each year due to the pupils who leave school each year. We must also bear in mind that these pupils are a selected group. However, taking into consideration all the factors stated above the percentages seem to indicate that the tendency to fail increases to the end of the third year after which there is a decrease in the fourth year. This decrease in the fourth year may be partly accounted for because of the unwillingness of teachers to prevent pupils from graduation after they have become seniors. It is interesting to note that Dr. O'Brien in his "Study of High School Failures" discovered the same general increase in the percentages of failures until the end of the third year with a slight decrease during the fourth year.

In attempting to account for this increase in the number of failures until the fourth year, two reasons at once suggest themselves to the investigator, first increased standards of achievement and second a more difficult curriculum in the later years of high school. It may be argued in favor of the first reason given that the dull and indifferent pupils are being eliminated during the first years in high school and that the more or less selected group which remains causes the teacher unconsciously to raise her standards with the resulting greater percentage of failure. However, an inquiry into the failure of pupils as related to their mental ability, the results of which are shown further on in this article, indicates that the failing pupils are on the whole just as intelligent as those who do not fail. This tends to disprove the selected group idea and in consequence the theory of increased standards in so far as they may be caused by a group of more intelligent pupils during later years. However, the group is to some extent, selected from the standpoint of perseverance and application, a fact which no doubt, does help to elevate the standards since the teacher judges mainly by results. Thus it would seem that rising standards of achievement are a factor in the increasing percentage of failure. The writer is inclined to attribute some of the increase to the second reason given, since the curriculum does and justly should increase in difficulty. It is a hard matter to estimate the amount of influence the increasing difficulty may have on the increase in the number of failures since the increased power of the pupils must be taken into consideration. But on the whole it seems safe to conclude that the increasingly difficult curriculum is a factor in the increase in the number of failures

FAILURE AND ELIMINATION FROM SCHOOL

It has been noted earlier in this study that apparently the length of a pupil's stay in school is dependent to some extent upon whether or not he fails to pass in the various subjects in the curriculum. Here we mean to carry the analysis and comparison somewhat further and discover to what extent failure is a factor in the elimination of a pupil.

It was stated earlier in this study that 46.5 per cent of the pupils who graduated, failed in one or more subjects while 56.7 per cent of those who left school before graduation failed in one or more subjects. This difference of 10 per cent seems to indicate a correlation between failure and elimination. This is particularly true of failure in the ninth grade or the first year in high school as the following facts will indicate.

	TOTAL NUMBER FAILING	NUMBER FAILING FIRST YEAR	PER CENT
Graduates..................	86	15	17.4
Non-graduates.............	157	111	70.7

Of the 136 pupils who failed first year in high school only 15 or 11.9 per cent graduate. These figures indicate that if failure during the first year in high school is not a cause of elimination, which appears extremely likely, it is at least a fairly safe basis from which to prognosticate elimination.

It is difficult to estimate just how large a factor failure during the first year is in eliminating pupils, for there is a large number of pupils who enter high school because the state compulsory attendance law demands that they attend school until they are 16 years of age unless they are regularly employed. The present continuation school law, operates to keep this type of pupil in school until the age of 16 because of the fact that many employers refuse to employ children between the ages of 14 and 16 because of the inconvenience of making arrangements so that those employees may attend school as required by the law. The length of time that this type of pupil will stay in high school is dependent upon his ability to secure employment. This same fact is one of the causes of failure resulting from lack of interest in school work, since they are only attending school until they are able to leave and consequently have very little interest in their work. During the years of the world war, which are in the main the years covered by this investigation, it was a comparatively easy thing to secure employment because of the scarcity of labor. Adding to this the high wages paid during that time and the desire of the adolescent for independence and money of his own to spend we can readily appreciate how great a factor the call of the industrial world was both in elimination and failure.

However, making due allowance for the commercial and industrial reasons for leaving school as enumerated above, the great percentage of those who fail, who leave school, makes it necessary to look further for reasons of failure and the consequent elimination from school. The different methods of teaching and administration which the pupil experiences on entering high school is undoubtedly a large factor in the failure of pupils during the first year in high school as has been repeatedly observed by educational writers. One phase of this problem, however, is so important that it deserves special mention. Namely, the change from the supervised study to that of preparation of lessons, for the most part, at home. This problem is being met as is suggested above by various methods of supervised study, where this is feasible. Where it is not possible it is obviously necessary to find some method of getting the pupil to do home study and not only to do it but to do it properly and efficiently. While it is not within the scope of this paper to propose means of accomplishing this end, the writer suggests that closer co-operation with parents, definite and clear assignment of lessons with insistence that the work assigned be performed, the teaching of proper methods of study, the arrangement of a schedule of study, and the increasing of interest in the various subjects by efficient teaching are important factors to be taken into consideration.

When we carry the study of the relation between failures and elimination to the second year of high school or the tenth grade, we find that only 158 pupils of the 243 originally included in this study remain. Of those remaining, 107 pupils, or approximately 68 per cent of these or approximately 40 leave school at the end of the second year. When this percentage is compared with the percentage of those failing during the first year, who leave school at the end of the first year, namely 69 per cent, we may conclude that failure during the second year in high school is a less important factor in elimination than failure during the first year. This correlation between failure and elimination becomes negligible during the third year as of a total of 72 pupils who failed during the third year only 15 or approximately 21 per cent leave school at the end of the year.

CLASSIFICATION OF PUPILS WHO FAILED ACCORDING TO COURSE

When the pupils who fail are classified according to the courses elected by them on entrance into high school the following distribution results.

TABLE III.—DISTRIBUTION OF PUPILS WHO FAILED AMONG THE CURRICULA

	ENTRANTS	FAILURES	PER CENT	GRADUATES	FAILURES	PER CENT
Commercial......	194	90	46.4	57	23	40.4
Modern language.	157	96	61.1	77	42	54.5
Classical..........	111	57	51.3	51	21	41.2
				NON-GRADUATES	FAILURES	PER CENT
Commercial..........................				137	67	48.2
Modern language......................				80	54	67.5
Classical............................				60	36	60.0

In the above table it is seen that the percentage of those who fail is greatest in the modern language curriculum, there being 61.1 per cent who fail in the modern language as compared to 46.4 per cent and 51.3 per cent in the commercial and classical courses respectively. In accounting for this difference the investigator at once inquires how the failures were distributed as to subjects since the only distinction between these curricula is in the subjects required. This distribution as to subjects results as follows.

TABLE IV.—DISTRIBUTION OF FAILURES AMONG SUBJECTS ACCORDING TO COURSES

Commercial Curriculum

	English	Mathematics	History	Latin	French	German	Science	Business	Total
Graduates........	16	4	1	0	2	7	0	20	50
Non-graduates....	52	27	20	1	6	14	24	24	168
Total............	68	31	21	1	8	21	24	44	218
Per cent.........	31.2	14.2	9.6	.5	3.7	9.6	11	20.2	100

Modern Language Curriculum

	English	Mathematics	History	Latin	French	German	Science	Total
Graduates.........	30	27	5	3	11	19	13	108
Non-graduates.....	24	44	24	4	5	17	14	132
Total.............	54	71	29	7	16	36	27	240
Per cent..........	22.5	29.6	12.1	2.9	6.6	15	11.2	100

Classical Curriculum

	English	Mathematics	History	Latin	French	German	Science	Total
Graduates..........	4	17	2	7	2	6	6	44
Non-graduates.....	23	26	5	20	6	0	4	84
Total..............	27	43	7	27	8	6	10	128
Per cent...........	21.1	33.6	5.5	21.1	6.2	4.7	7.8	100

The percentage of failures in the modern language curriculum differ from the others chiefly in the following subjects—French and German, history and mathematics. The combined percentage of French and German in that curriculum is 21.6 as compared to 13.3 and 10.9 in the commercial and classical curriculum respectively. This difference can be only partly accounted for by the different requirements in the curricula since the requirements are the same in two of these as regards these subjects, with the exception of 1 year, in which physics may be substituted for French in the classical curriculum, which will scarcely account for the wide difference. However, when a further reason for this difference in percentage is sought for, very little that might account for it can be discovered, unless it be that the correlation between the Latin, which is required in the classical curriculum, and the study of French and German is so great as to be of material assistance to the stuhent of the modern languages. The difference in the percentages of the commercial and modern language curriculum insofar as French and German are concerned can readily be accounted for by differences in the requirements in the two curriculum. The greater percentage is the case of history in the modern language curriculum can be accounted for, when compared with the classical curriculum, by the fact, that only 1 year of history is required in the classical as compared to two in the modern language curriculum. This difference in curricula, however, does not hold true in the case of the modern language, and the commercial curricula since the requirements as regards history are practically the same in both. The writer has been unable to discover anything that might operate to cause this excess of percentage in the modern language course unless it be that the more difficult subjects in that course bring about a comparative neglect of history with the consequent greater percentage of failures.

The percentages of failures in mathematics, namely; 14.2, 29.6, and 33.6 in the commercial, modern language, and classical curricula respectively must be considered in relation to the requirements of the various courses. One year of mathematics is required in the commercial curriculum 2½ in the classical, and 4 in the modern language. These course requirements when considered in relation to the percentages of failure given above indicate that commercial arithmetic, which is the only mathematics required in the commercial curriculum is a difficult subject for the average high school student. The fact that this subject is given in the first year before any of the non-graduates have left school helps to account for the large percentage of failure when compared, on a yearly basis, with the other courses. In this connection, however, it must not be forgotten that mathematics is required in the first year of both curricula, which fact tends to emphasize the greater percentage in the commercial curricula. The excess of failures in the classical curriculum as compared to the modern language curriculum indicates that the greatest number of failures occur in the first 2½ years of high school in the subjects of plane geometry and algebra and that the student who selects the classical curriculum because of a liking for the study of Latin is likely to find difficulty with mathematics.

One striking difference in the percentage of failures when distributed as to courses occurs in English. These percentages of 31.2, 22.5 and 21.1 in the commercial, modern language, and classical curricula respectively are the more easily compared since the number of years required in English are the same in all. This excess in the commercial curriculum indicates that the practical English of that curriculum presents greater difficulty to the average high school student than does the more literary type of English required in the other curriculum.

Although the data given in this study of failures as to courses have been given separately for the graduates and non-graduates there was little indicated that is of importance to the investigator by this distinction, with the exception of the greater number of failures in English in the case of the non-graduates as compared with the graduates in the classical and commercial curriculum. This excess of failures among the non-graduates indicates that the greater number of failures in English in these two courses occurs in the first years of high school before the non-graduates have left school. It also might indicate that failure in English in these courses is indicative of probable elimination from school.

FAILURES AND SUBJECTS

A still further analysis of the failures in terms of the subjects in which they occurred results in the following distribution.

TABLE V

Subjects	English	Mathematics	History	Latin	French	German	Science	Business	Total
Graduates........	50	48	8	10	15	32	19	20	202
Per cent..........	24.7	23.7	4	5	7.4	15.8	9.4	10	100
Non-graduates....	99	97	49	25	17	31	42	24	384
Per cent..........	25.3	25.1	12.5	6.5	4.4	8.1	10.9	6.3	100
Total.............	149	145	57	35	32	63	61	44	586
Per cent..........	25.4	24.7	9.7	6	5.5	10.8	10.4	7.5	100

Under the heading "Mathematics," commercial arithmetic is included together with the standard high school subjects of algebra, geometry, and trigonometry. Science includes biology, general science, physics, and chemistry. Business subjects include stenography, typewriting, commercial law and commercial geography. German has been discontinued as a high school subject and French substituted for it therefore French and German should be included under the one head modern language. They are thus considered in this study.

It is seen in the above table that English and mathematics include 50 per cent or approximately one half of all the failures. This is partly accounted for because of the fact that English is required of all pupils during the entire 4 years and that some form of mathematics is also required of all pupils at some time and of some of the pupils all the time. The other subjects are all elective to a greater or less extent, some being required in certain curricula only thus being elective in the sense that the course is a matter of free choice on the part of the pupil, while others are elective in certain curricula. The question at once arises, is the matter of a subject being required or elective a factor in the passing or failing of a subject? Making due allowance for the greater number of pupils who take the required subjects it would seem that a pupil is no more likely to fail in an elective subject than in a required subject. The percentages of the table above seem to indicate the contrary. However, in arriving at a conclusion of that kind the data concerning the graduates should be taken rather than that of the entire number of pupils since there is no way of telling how many of the nongraduates entered the various classes. Therefore considering only those who graduated and taking the business subjects as an example of a partial elective and at the same time bearing in mind that according to Table II only 30.8 per cent of the entire number of pupils who failed were commercial students and took business subjects the facts seem to indicate that there is very little difference as to likelihood of failure between a required and an elective subject of this type. In arriving at the above conclusion the writer multiplied the percentage of failures in the business subjects by three which raised it to 30 per cent as compared to 24.7 per cent in English and 23.7 per cent in mathematics. The number of hours required for the three subjects considered are practically the same.

Making the same sort of comparison in the case of Latin, which too is an elective in the sense that the classical curriculum is elective and multiplying the percentage of Latin failures by four since approximately one-fourth of students failing were classical students we have a percentage of 20 per cent as compared with the percentages in English and mathematics. From the foregoing study it appears that a study being elective in the sense that it is only required in a curriculum which is elective makes no appreciable difference in so far as failure is concerned.

Referring again to Table No. V and comparing the records of the graduates with those of the non-graduates we find that there is only 1.1 per cent difference as to English, 1.4 per cent in mathematics, and similarly varying differences in other subjects, all of which may be readily accounted for by taking into consideration the years in which the subjects were given as well as the fact that a great number of the non-graduates are in school only 1 year.

THE INITIAL RECORD IN HIGH SCHOOL FOR PROGNOSIS OF FAILURE

We have already discussed, at some length, the effect that failure during the first year in high school has upon elimination from school. When we study initial failure in high school we discover some interesting facts.

Of the 126 pupils who failed during the first year 54 continued in school for at least one semester longer, and of these 40 or 74.1 per cent failed. Fifty-nine pupils who fail during the second year enter the third year and of these 42 or approximately 71.1 per cent fail during the third year.

When we consider that each succeeding year leaves a more highly selected group, as a result of the fact that the worst failures leave school, the latter percentage is comparatively greater than the first. In any event it is fairly safe to conclude that a pupil who fails during any one of his first 2 years in high school is very likely to do so in the succeeding year.

AGE ON ENTERING HIGH SCHOOL AND FAILURE

Having discovered that initial failure in high school is a fairly safe standard by which to prognosticate failure in the succeeding year, we proceed to the study of the ages of the pupils on entering high school and their relation to failures.

TABLE VI.—DISTRIBUTION OF PUPILS ENTERING HIGH SCHOOL AS TO CHRONOLOGICAL AGE

Age on entering	12	13	14	15	16	17	18
All pupils	9	84	163	151	37	15	3
Graduates	7	51	71	51	1	3	1
Per cent	77.7	60.7	43.6	33.7	2.7	20	33.3
Pupils failing	3	35	86	87	25	7	0
Per cent	33.3	41.6	52.8	57.6	67.6	46.6	

The age of the pupils in this table is that of their nearest birthday. Thus in the 13-year group are included pupils whose age varied from 12 years 6 months to 13 years 6 months.

A study of this table will convince the students of high school failures that the percentage of pupils who fail varies directly with the age at which the pupil enters school. An apparent contradiction to this occurs in the case of the 17- and 18-year-old pupils but this is readily accounted for because the pupils in this group are a selected group since only the pupil of a higher intellectual type will enter school and continue his education at an age so far advanced beyond the average age of the high school pupil. On the other hand there is a possibility that his greater experience in the world at large may be a factor in his comparative success. However, experience with these pupils of advanced age seems to indicate that the former conclusion is true.

The percentage of failure as will be seen, increases from 33.3 per cent at the age of 12 to 67.6 at the age of 16. From this we may conclude that the chances of failing in the case of a pupil who enters at the age of 12 are but one in three as compared to an even chance at 14 and chances of two to three at 16.

The greater maturity of the pupils who enter at 16 may be a factor in his failure, for the association with the younger pupils who are in the majority tends to discourage the pupil and cause him to lose interest in the work. Then too a comparison of his financial condition with that of his friends who are at work tends to draw him out of school with the resulting loss of interest and failure. This last observation holds true for girls as well as boys.

When the percentage of entrants who graduate is distributed according to age on entering, the result as seen is a constantly decreasing percentage of graduates as the age of the pupils on entering increases with a slight decrease at the ages of 17 and 18, which can be accounted for as above noted.

A more detailed study of this table reveals the fact that both the median and the average age of the pupil on graduating is 18 years and that 50 per cent of the pupils who entered high school less than 14½ years of age graduated as compared with 27.2 per cent of those who enter at an age above 14½ years.

FAILURES AND MENTAL AGE

The increased use of intelligence tests and the realization by educators that these tests are valuable guides to the teacher and administrator in diagnosing and remedying mistakes in the grading of pupils raises the question whether or not the intelligence test may be used as an instrument for the prevention of failure in high school.

The following study is based upon the results of an Otis Group Intelligence Test given to the 261 pupils of the four classes in high school. The records show only the score made; the intelligence quotient apparently was not computed. The scores vary from 56 to 202 and are listed in the table by 20 points. The heading of each column indicates the highest score included in each group.

TABLE VII.—DISTRIBUTION OF PUPILS AS TO SCORE MADE IN INTELLIGENCE TEST

	79	99	119	139	159	179	202
All pupils	11	30	69	75	48	17	11
Failing pupils	8	19	37	41	20	5	3
Per cent	72.7	63.3	53.6	54.6	41.7	29.4	27.3

The median score for all the pupils is 123 and that for those failing 130. This difference is so small that it signifies that there is practically no difference as to mental ability between failing pupils and those who do not fail. This conclusion agrees with that arrived at by O'Brien in his study.

It is significant, however, that the percentage of failing pupils decreases in the various groups as the score increases. This seems to indicate that an intelligence test has value from the standpoint of prognosis in failure only in the cases of those pupils who have very high or low scores and that mental ability is a factor in failure only when the pupils are of decidedly superior or inferior in intelligence (as revealed by the test).

FAILURES AND HOME STUDY

If, as is indicated in the preceding study, the failure of the majority of the pupils is not dependent on mental ability, is application on the part of the pupil a factor in failure? In order to find an answer to the question propounded above the pupils in the three upper grades of the high school were asked to state how much time they spent in daily home study. In order that the answers might be as nearly accurate as possible and to minimize any tendency toward exaggeration the pupils were assured that the answers given by them would not be used in connection with any high school work. The following was the result of a tabulation of these answers.

Hours study	.5	1	1.5	2	2.5	3	3.5	4
Failures	7	14	29	29	6	10	6	6
Non-failures	2	10	13	24	18	10	10	15

Both the median and the average number of hours spent in home study by the failing pupils was 2 as opposed to 2½ on the part of the non-failing pupils. While this is a comparatively small difference in time, it nevertheless indicated that home study is to some extent at least a factor in the failure of pupils.

The writer realizes that the data in the above are open to criticism since there is no way of proving the accuracy of the pupils' statements. Then too the interpretation on the part of a pupil as to what really constitutes study varies with the individual pupil. However, making due allowance for the factors referred to above there nevertheless seems to be some ground for the conclusion that home study is a factor in the failure of pupils.

Admitting this correlation between home study and success in school work, it follows that one way to decrease the number of failures is to increase the amount of time spent in home study and make it more efficient. Means of doing this have been discussed earlier in this article.

SUMMARY

The following facts seem to be indicated by the data which have been gathered and arranged in the foregoing study.

More than one-half of all high school entrants fail in one or more subjects at some time during their high school career.

In the group of pupils who graduate there is an increasing percentage of failure from the first to the fourth year with a slight decline in the fourth year. This seems to indicate that the tendency to fail increases as the pupil remains in school. It may also indicate that the subjects in the tenth and eleventh grades are more difficult for the average pupil than those of the ninth grade.

Failure seems to be one of the causes of elimination from high school; particularly failure during the freshman year as the very small percentage of the pupils failing, who graduate indicates.

There is a greater percentage of failure in the modern language curriculum than in either of the other two curricula. This difference occurs chiefly in the modern languages, history, and mathematics. The study of Latin seems to be of assistance in the mastery of modern languages.

Failures in English and mathematics predominate when classification is made as to subject. However, when the percentages of failure in these subjects are compared with those of the other subjects on the basis of the number of hours required they seem to be justified. The fact that a subject is elective does not materially affect the likelihood of failure.

Records show that if a pupil fails in either of the first 2 years in high school, he is extremely likely to do so in the following year.

The tendency to failure varies directly as the age of the pupil on entering high school. The chances of failure are one in three for pupils entering at 12 as opposed to an even chance for those entering at 14 and two chances in three for those entering at 16. The pupils who enter at 17 or later appear to be a selected group and have a smaller percentage of failure than those of the 3 preceding years.

The pupils who fail do not seem to be inferior in mental ability to those who do not, but the tendency to fail seems to vary inversely as to the amount of application as revealed by the number of hours spent in home study.

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